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THE

MEDICAL JOURNAL OF AUSTRALIA

VOL. II.—10TH YEAR. SYDNEY: SATURDAY, OCTOBER 13, 1923. No. 15.

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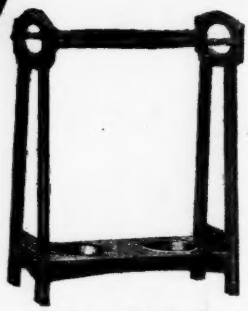

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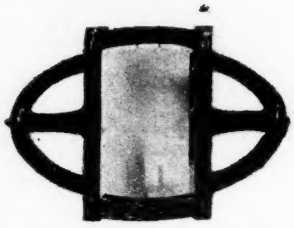

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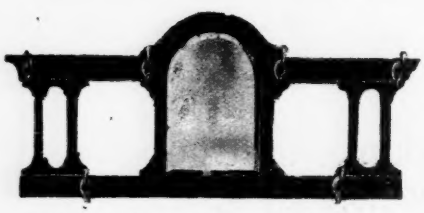

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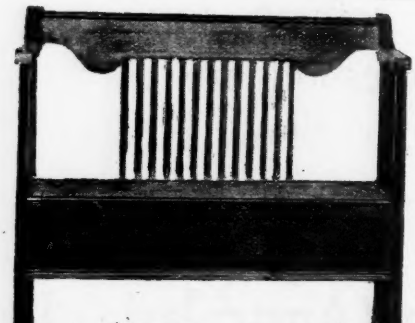

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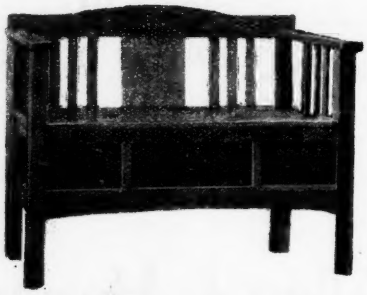

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VOL. II.—10TH YEAR. SYDNEY: SATURDAY, OCTOBER 13, 1923. No. 15.

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An Address.[1]

BY R. B. WADE, M.D., Ch.M. (Sydney),
Chairman of the Orthopædic Section of the New South Wales Branch of the British Medical Association.

AT this inaugural address on the formation of the Orthopædic Section of the New South Wales Branch of the British Medical Association may I express my sense of the great honour done me in electing me as your first Chairman?

This is, I believe, the first orthopædic society in Australia; may we hope that it will prove a sturdy infant and that what it now lacks in numerical strength, will be made up for in keenness and sincerity and that some day it will leave its mark on the orthopædic history of the world and its members be recognized as leaders of orthopædic work and investigation.

Scientific medicine is still in its comparative infancy. It was in 1745, not yet two centuries ago, that a new body called "The Master, Governors and Commonalty of the Art and Science of Surgeons of London" was proclaimed by Parliament as a body set free from the old City Guild of "The Master and Governors of the Mystery and Commonalty of the Barbers and Surgeons of London" and its new point of view and aim was that mystery and secrecy should be done away with and that all knowledge should be pooled into a common fund to which all might have access. William Cheselden, the first Warden, initiated this body so that the work should be on scientific lines of investigation and not on charlatanism and most important of all that all new discoveries should be for the public advantage and not for personal gain. This society became nearly a century later the Royal College of Surgeons.

Up to that the practice of medicine was in the hands of the Barber-Surgeons, recognised by law, "old wives," bonesetters *et cetera*, all these classes living by imparting the secrets of their trade from father to son, mother to daughter, practising secret methods of treatment for their private gain and withholding all knowledge from others.

It is of interest here to note that there still exists in Great Britain the old craft of "bonesetters" and still more worthy of note that during the last great war when orthopædic cases were in such large numbers and when Great Britain did not for some two years make an effort to cope with them by the use of men trained in orthopædic methods, and then

[1] Read at the inaugural meeting of the Orthopædic Section of the New South Wales Branch of the British Medical Association.

with numbers that proved all too scanty, that an attempt was made to legalize the craft so as to allow them to be used officially amongst this great mass of cripples. Though this failed, one of their number was honoured by knighthood for the good work accomplished by him in the treatment of the effects of war injuries and there can be no doubt that the scope was so great that he must have been of very great service. If one can criticize thus the methods of the old country, in that she was tardy in her efforts for relief, what can we say for ourselves in Australia who waited to instal orthopædic methods until the war was practically over. We have now many a man dependent on his military pension who might under proper methods earlier applied be a functionally whole man.

I have referred to these matters of the past to show the necessity of our existence as a class of surgeons who are trying to do a special work, and though we may hope that never again in our time will come another great war with such a mass of orthopædic material, still there will always be work enough for us to do in civil life.

What is the ground that the orthopædic surgeon tries to cover? I can do no better than quote the list given in the last work on orthopædic surgery by Jones and Lovett.

(i.) Joints and their affections;

(ii.) Bones and their affections, including ununited and mal-united fractures;

(iii.) Disturbances of the neuro-muscular mechanism;

(iv.) Congenital deformities;

(v.) Static and other acquired deformities;

(vii.) The principles and details of apparatus.

Will you forgive me if I mention that the word orthopædic is derived from ὀρθός, straight, and παῖς, a child, and not as the public and I regret to say most medical men consider, that the last part of the word is derived from *pes*, a foot, whence the somewhat common error that we are a more or less, according to the point of view, glorified sort of corn-curer.

Perhaps the best description of our work is that it concerns itself mainly with the restoration of functional power in the tissues controlling the bony framework of the trunk and limbs. With, perhaps, the exceptions of tuberculous bones and acute sepsis of bones and joints we are not much concerned with disease as an acute condition. We do not have to save the patient's life by our efforts, but rather we treat the aftermath of disease and the evils it has left behind it, that are interfering with the individual's functional activity, meaning by function his power to earn an active, wage-earning existence.

That there is scope for us must, I think, be admitted at once and also that the general surgeon does not deal fully with this side of disease. The reason is easy to find, for the general practitioner or general surgeon finds it more and more difficult to envisage our ever-increasing scientific knowledge and has to realize that it is more than one brain can do to cover all the ground. His work must necessarily restrict him to the severe and arduous task of arresting and curing disease and essentially to that of saving life, so that he has very little time to spare on the momentarily less important work of conserving function. The result of this constantly enlarging mass of knowledge and enlargement of our spheres of interest is that the era of specialization has come and the different specialties have quite enough both in work and in investigation to occupy and employ those interested in them.

Let this explanation be excuse enough for our being as an orthopædic society. In fact I can foresee that our present scope must be again subdivided as our knowledge of our own special subjects waxes.

Specialization is not merely a separation of interests and total abstraction of that particular line of work from others, but it means that our researches and discoveries along those lines will react on the man in general work and make clear many obscure points and the general practitioner will learn to employ our methods that have stood the test of time and experimentation. We may hope that some day the general practitioner will realize that the hemiplegic need not be abandoned to a crippledom of hopeless postural contractures, that properly applied splinting should be an early method of treatment of anterior polio-myelitis, that so-called lumbago, fibrositis and rheumatic pains may be due to static-skeletal conditions.

It is for us and others who practise orthopædic surgery, to see—I was nearly going to say that it does not fall from its high estate in our hands, but in this country it has not yet reached that point of praise, though in Europe and America it is on a very high plane of surgery and claims as its servants men of world-wide reputation and fame. It is for us to see that we follow in their footsteps and do nothing unworthy of our heritage. Perhaps as one of the older men in the profession here and with the greater part of my surgical life behind me, I may be permitted to point out some of the pitfalls ahead.

First in this young country of ours where a competency comes so easily and a man may work into a comfortable existence in surgery without the hard preliminary grind that exists in older countries, one is apt to leave the scientific side apart and be content to be a mere money-spinner, keeping ourselves abreast of the work of others and originating nothing. This is bad and until we realize that each man to justify his medical existence must add at least one dab of mortar to the temple of scientific medicine, we cannot grow into recognition as a scientific body with the welfare of our subject at heart.

Again, one can see the by no means small possibility of spectacular surgery over-riding the main issue of restoration of function. This is not common to us alone, but applies to all classes of surgery and the man who is doing it, is doing bad work, for the spectacular side invariably over-rides the utilitarian and many an operation that is a source of pride to the surgeon and pleasure to the onlooker to see the manipulative skill made evident, is nevertheless very often ill-judged in that the ulti-

mate utility of the result is not sufficiently well considered. I need do no more than give one example. We can see all round us instances of misapplied surgical dexterity in the shape of tendon graftings where the muscle panorama has been but ill-surveyed beforehand and the operation, though doubtless pretty and spectacular, nay often lucrative, has been found a failure from the functional point of view because the correlation of the various muscular groups had not been properly worked out.

I may quote though with some mental reservation H. O. Thomas who said that the blacksmith's hammer deftly used was in most cases a more powerful reparative instrument than the surgeon's knife.

Arising too out of this *cacœthus operandi* comes the neglect of the after-care and the lack of personal supervision of the case throughout. In our work the operation can only be a means to one end, that is the restoration to function of the affected part. It is only by this individual after-care in the fitting of splints, muscle re-education and in brief all the routine of the prolonged after treatment that is necessary in all orthopædic cases, that the orthopædic surgeon justifies his existence. He must take heed lest he confine himself to the footlights of operating and be not content to accept the long obligation of seeing the case through to its limits at all costs of time and trouble to himself.

Another phase of our work apart from the correction of deformity and restoration of function, is one that, unfortunately, we have not much scope as yet as individuals to do; that is the prevention of deformity. This must still lie with the general practitioner and it will only be by the frequent enunciation of our general principles and methods and teaching them to students that their meaning will be recognized and steps taken during the early stages of those conditions that are apt to be followed by deformity, that deformity will be prevented and incidentally our scope of work lessened. If we can educate our *confrères* in medicine up to this point, we too may say that we have done our part in the field of preventive medicine.

What are the attributes an orthopædic surgeon should possess or, if lacking, should strive to attain? He should have mechanical skill and dexterity and should perfect himself in operative methods by carpentering work, not only on the cadaver, but also make himself cognizant of the practical use of any mechanic's tools that he may have to use. It is not a heaven-sent gift to use a chisel or fret-saw in the fashioning of a new joint; it must be learnt. He should have a practical acquaintance with the details of splint-making and should, if necessary, be able to use the smithy tools to make or shape or fit a splint as necessity may demand. He must be a man of infinite patience and be prepared—I am reiterating a previous statement, but feel sure it is worth the stress—to oversee the after-care and restoration to power of the patient. He even more than other surgeons—were such a thing possible—must keep himself fully up to his anatomical and dissecting work. We may ask if we are in a specialty where most of the spadework has been done and the way clear before us, as it has, perhaps, been done in the specialties of diseases of the eye and in gynæcology. No; fortunately for us and our interest we are on the threshold and the future holds out infinite possibilities.

Research on many points can be pointed out: splints and splint material; can we say plaster of Paris is to be the last word in fixation methods? Are not the numerous and more or less diverse forms of apparatus for tuberculous hips but an evidence of the poverty of our efforts even should we shut our eyes to the malpositions acquired with them in patients cured of tuberculous hip disease?

What a scope there is for the investigator in the functions of groups of muscles and into the question of muscle tonus! The treatment of infantile paralysis is far from standardized and we can say the same for most of our work, that standard methods that are absolutely satisfactory, have yet to come and that nearly every new patient sets us a problem which, if we try to solve it and correlate our results, will help ourselves and our fellows finally to become masters of our craft.

BREAST FEEDING.[1]

By S. Fancourt McDonald, M.D., B.S. (Melbourne), M.R.C.P. (London).
Honorary Physician, Hospital for Sick Children, Brisbane.

The subject of breast feeding is often much discussed and even more often ignored. For instance, compare the space allotted in a book on infant feeding to breast feeding to the space allotted to normal labour in a text-book on midwifery. And yet though breast feeding is the normal method of infant feeding, it is as liable to go wrong as normal labour and in proportion it requires as much knowledge of its mechanism and difficulties.

The advantages of breast feeding are: (i.) Greatly lessened infantile mortality: four times as many bottle-fed babies die as breast-fed; (ii.) simplicity and saving of the mother's time; (iii.) cheapness; "Lactogen"-fed babies cost eight to ten shillings a week.

The essentials of breast feeding are: (i.) A healthy mother able to supply a sufficient quantity of milk; (ii.) a baby able to suck and empty the mother's breasts.

Difficulties of Feeding.

Difficulties in feeding may have their causes in the mother or in the baby.

Causes in the Mother.

Formerly pulmonary tuberculosis in the mother was held to be an absolute bar to nursing. It is suggested, however, that breast feeding is the best possible start for a baby and is likely to make it more resistant and that all children in a tuberculous house are sure to be infected, anyway; and finally that there is little evidence of breast milk being a carrier of tubercle bacilli.

[1] Read at a meeting of the Queensland Branch of the British Medical Association on August 3, 1923.

Hence we should look on nursing in tuberculosis in the same way as we look on it in other diseases, such as renal or cardiac or glycosuria, by judging each case on its merits. It is worth remembering, by the way, that the reducing substance found in the urine of nursing mothers is lactose, not glucose; babies have been weaned because of it.

Mastitis of one breast is not a bar to nursing, sometimes not even of both breasts, though the baby does not usually like the taste of milk from an inflamed breast.

Ill-formed nipples, however, often are.

Maternal worries and disturbances upset babies quite often. Thus at the Salvation Army Home at Breakfast Creek the Matron informs me that many babies are upset after their mothers have visitors.

Of indigestion and unsuitable feeding the same thing may be said. The usual dietary for a nursing mother is stuffing with carbo-hydrates, milk and alcohol. It is quite unnecessary; it does her no good or even gives her dyspepsia. Some of this dyspepsia she will pass on to her baby. As long as a woman takes ample quantities of fluid and her diet is sufficient to satisfy her and contains no unusual nor indigestible articles, she will lactate at her best. Certain types of women seem to be unable to maintain a supply of milk in spite of anything we do.

Causes in the Child.

Difficulty may arise from weakness and inability to suck in premature or weak infants, from deformity such as hare-lip or excessive post-nasal masses, from mental deficiency, as in some mongols or from faulty position during feeding with the baby's nose buried in a large soft breast.

There may be intolerance. This is probably the most common cause of premature weaning.

There may also be pyloric stenosis, when the small frequent feedings are apt to upset the supply of milk.

Having noted these points, what are we to do when a mother complains that she cannot feed her baby? First and foremost, the most important period in breast feeding is the three months before baby is born, as it is in congenital syphilis.

I am not going to recapitulate the ante-natal care which every mother and child should receive, but the following points demand attention.

The mental factor is important. Ninety-nine out of every hundred women can nurse their babies, but most must be convinced of it.

The breast can be treated and cared for by massage, elevation of depressed nipples, cleanliness and support, all small matters, but of great importance later.

After delivery how soon should baby be put to the breast? Opinions differ. Some say as soon as the stress of labour is over; others not for forty-eight hours. I incline to the former view. Pritchard holds that colostrum is a most valuable immunizing agent and that a child must be sensitized to milk by a preliminary feeding of colostrum. But if the baby does not get colostrum, be sure it gets nothing else except water. The use of such soothers as malt, honey, sugar, glycerine is to be condemned. They lead to perverted tastes and refusal of breast milk. Once, however, the baby has begun taking the breast, the next essentials are education and regular habits. How often is the baby to be fed? Many say every two hours at first; others say every three hours. I know one infant who left the nursing home when two weeks old being fed every four hours by day and not at all at night. Probably the strength of the child is the important factor; a strong child will take enough milk at a feeding to carry it on for a longer period than a weakling.

The amount of milk obtainable from a breast is directly proportional to the amount withdrawn and the thoroughness of the withdrawal.

At this stage we may expect trouble. "The milk," says the nurse, mother or grandmother, "does not satisfy baby; he is not having enough; he gets gastritis from it; wouldn't it be better to try him with ——— ?"

What you must do here is to see baby fed in your presence and judge for yourself.

Does baby gulp all he wants down in five minutes and bellow and refuse more? Does he have much wind and perhaps regurgitation after this? What does his cry mean, hunger or pain? What are his stools like? Finally try a test-meal. Weigh baby before and after feeding on an accurate pair of scales. If—but I do not expect you can—if you can do this for the whole twenty-four hours, it would be splendid. But if not, weighing after even one feeding is valuable, if you are sure that baby is really hungry, say half an hour beyond his proper feeding time.

Roughly the amount of milk a baby should have is given in the following table from Pritchard.

First week, 300 grammes (10 ounces) in twenty-four hours.

Fourth week, 500 grammes (18 ounces) in twenty-four hours.

Third month, 750 grammes (27 ounces) in twenty-four hours.

Sixth month, 1,000 grammes (35 ounces) in twenty-four hours.

Twelfth month, 1,350 grammes (48 ounces) in twenty-four hours.

More accurately the calorie for weight method should be used. Babies under six months of age, should receive 100 calories for each kilogram of body weight (50 calories for each pound). Babies over six months receive 90 calories for every kilogram body weight.

The amount to be obtained at each feeding will, of course, vary with the number of feedings.

Next, if we find that baby is not getting enough, what can we do to increase the amount?

Of the various lactogogues sold as such, I do not think that there is any real evidence of the value, apart from the undoubted psychic effect which many produce.

Stout and other alcoholic drinks are much advocated by the laity. Till a few weeks ago I should have condemned them whole-heartedly. Now I have just heard of a mother who until stout was exhibited, had no milk at all; now she "gallons." Perhaps suggestion took effect here, too.

Some mothers tell you that they had plenty of milk till they got up and started doing the housework: "Then it all went." How far housework involves overwork in a hot, unpleasant atmosphere, worry, depression and ill-feeding is another matter. On the other hand many of the large, slack, soft, over-fed women are much benefited by daily outdoor exercise.

Gruels, cocoa, extra milk and the rest of the nursing dietary usually prescribed are in most cases likely to do only harm. These messes are not well tolerated by many stomachs and much more satisfactory is a plain simple diet of the type the mother has been used to.

Water is the best and most important of lactogogues. It is a good rule for a nursing mother, especially in hot weather, to drink at least two extra litres of water daily.

Breast massage and hot and cold applications are often most effective. The former may well be begun before delivery.

A method possible in some maternity homes, such as the Salvation Army Nursing Home, is to apply a more vigorous child to the breasts as well as the mother's own baby. It is said to be most effective.

"The milk," says the nurse, "is not agreeing with baby. It causes pain, vomiting and gastritis." When you inquire, you discover that this is a polite way of saying diarrhœa. (Gastritis is the rarest of diseases; infants very seldom have gastritis or enteritis; they may even have profuse diarrhœa without any colitis. The name gastro-enteritis is an unfortunate one and seems to emphasize the great defect of medicine in Queensland, the lack of *post mortem* inquiry.) In such a case look at the stools, and unless baby actually has an acute infection which is rare, you will find that baby has what is called "curd indigestion." The motions are full of large, white curds, probably with a little green slime. It is not an inflammation, there are no pus cells and probably there is no fever. The condition is really a fat intolerance; the white lumps are masses of soap, the fatty acids of the pancreatic digestion combined with calcium. Genuine curd indigestion is very rare indeed in breast-fed children and not common in bottle-fed babies.

The treatment is the reduction of fat in the feeding, if possible doing away with the rich strippings and giving only "fore" and "mid" milk. This may often be done by giving half the usual time of feeding on each breast, thus avoiding the strippings. The breasts should be well emptied by hand or the breast pump afterwards in some cases, but this is often not necessary. Sometimes a preliminary dose of 0.18 grammes of sodium citrate in a teaspoonful of water is helpful before feeding and in some cases it may be necessary to give an inverted complementary feeding with a low fat food, such as whey or skim milk before the breast is given at all, though this must be done most cautiously. In this condition great care and patience are often required and the parents may need as much treatment as the baby, while "nurses," neighbours and relatives make frantic efforts to have breast feeding stopped and an artificial food adopted.

Another constant source of complaint is constipation. This may be due to (*a*) insufficient food, (*b*) excess of castor oil or (*c*) genuine sluggishness of the bowels. The last is the only form which gives any real trouble. It is to be remembered that constipation with one motion in forty-eight hours in a breast-fed baby is a minor matter. In a bottle-fed baby things are different. If aperients are necessary there are many satisfactory drugs, "Elixir Cascara," of the Australian Pharmaceutic Formulary, "Syrup of Figs," "Milk of Magnesia," phenolphthalein given in a chocolate base, but perhaps better than all are the formation of regular habits and the homely soap stick.

The excessive use of castor oil is a very real cause of constipation and it must be constantly watched. The average mother flies to castor oil for all infantile ills and baby pays for it later.

But having gone into all these points and having found them all in order, if baby is still not gaining weight, what next? First and foremost, examine baby all over. Apart from febrile complaints which are usually fairly manifest, there are two diseases often missed which are of the greatest importance: (*a*) congenital syphilis and (*b*) congenital heart disease. The only obvious signs of each of these may be refusal to gain weight. For the former we can do much; for the latter little, but in both cases on no account wean.

But if the mother is producing insufficient milk and no effort on your part will increase it, what are you to do? Many people, I am sorry to say, wean the baby which is a very close approach to malpractice, in this country at least.

It is much better to try complementary feeding, that is making up each breast feeding to the child's full requirements, by giving an artificial food after the child has emptied the breast. This is a method easily carried out, of wide applicability and usually much success. Its advantages are (i.) that it insures a small but certain and often an increasing supply of breast milk in each feeding; a quarter of breast milk in the whole feeding is worth while even; (ii.) that by making certain that the breasts are completely emptied, it causes the maximum secretion of milk; (iii.) that by restoring the mother's confidence, it increases the secretion of milk; (iv.) that by strengthening the child, it increases his power of suction, so increasing the breast stimulus, giving us a "benign circle."

The method is very simple; try your test meal two or three times in the twenty-four hours; work out roughly the amount lacking in each feeding and supply it. There are one or two important minor points.

The feedings should be very regular and the baby should be made to empty the breast as thoroughly as he can. Sometimes it is a good plan when there is very little milk, to give him both breasts.

The food should not be given with a bottle, but from a spoon, to prevent laziness and refusal of the breast. The "Hygeia" type of feeding bottle is, I think, an exception, but it should have only a small opening.

The food should not be too sweet, otherwise we shall have perverted tastes and this brings us to the actual composition of the food. On the whole, I think that for an initial trial a food low in fat is an advantage. There are three ways of getting this: (i.) by diluting milk which means diluting all its constituents; (ii.) by using skim milk; (iii.) by using whey, which cuts down both fat and protein. All are useful and all except the third may be carried out with the many dried preparations now on the market; by using dilute "Glaxo" or "Lactogen" and adding carbo-hydrate in the form of lactose, by using "Mellin's Food" or "Maltogen" or by using condensed milk. It may be done by mixing the "Glaxo," allowing it to stand for twenty minutes and skimming off the supernatant fat. The manufacturers tell me that this will reduce the fat content to 2.4%. Another method is to use a dried skim milk powder, often with most satisfactory results. In some cases where digestion seems very weak, peptonization or pancreatization ("Bengerizing") of the selected food may be advisable; let this be for at least twenty minutes or better half an hour. The use of whey involves the use of fresh or allegedly fresh milk, a doubtful matter in this city. I hesitate to recommend this course for the average household. Condensed milk is to be avoided; its sweetness makes the breast milk less palatable.

There remains a type of case in which for all one's efforts nothing seems a success. One finds the mother with ample milk, but for some reason the baby refuses it. Every attempt at breast feeding leads to a scene between the baby, the mother and often the doctor. The baby does not gain; he sleeps badly; the stools are not quite satisfactory and finally an artificial food is given with your unwilling acquiescence or even against your advice. To your annoyance baby goes ahead immediately and never looks back.

H. C. Cameron who is a very good observer, suggests that many of these cases are due to nervousness. He states if attacked from this point with quiet rooms, regularity, a tactful nurse and in bad cases small doses of bromide and chloral, much may be done. Too often these are counsels of perfection in an average home, but his views are very worth remembering and applying when possible.

That there may be a very real unsuitability in breast milk is shown by the following history given me by the Matron of that very excellent institution, the Salvation Army Maternity Home at Breakfast Creek.

Two girls with apparently normal pregnancies and deliveries began nursing their babies on the same day. No. 1 gave no trouble; No. 2 could do nothing right. After much time and trouble with No. 2 baby going downhill, No. 1 mother began nursing No. 2 baby as well as her own and all went most satisfactorily. Then Baby No. 2 was returned to its own mother (whose supply had been kept up by pumping and milking) after a week with No. 1 mother and again failed. No. 1 mother then nursed both babies quite successfully till they were discharged from hospital. This by the way is no exceptional feat; one woman has been known to yield 160 cubic centimetres (56 ounces) of milk in one day to two babies, both thriving, and for this reason twins constitute no reason for precipitate weaning.

Weaning.

Usually it may be said that weaning should take place between the ninth and twelfth month, but in this country I think we should be more elastic and never wean in summer, even if it means nursing in part up to sixteen months. Many mothers nurse their children for longer periods, but this is not necessarily with an eye to baby's interest alone. Above all if baby has any form of diarrhœa in summer, weaning should not be thought of; the value of even a very small quantity of breast milk is so great that every effort should be made to retain what there may be, even if only a few ounces.

I do not think that the return of menstruation is an indication for immediate weaning. Many children seem to be in no way upset.

In conclusion I must thank you for having listened to me so patiently, though having said so much that must be stale to all of you. Still I must confess that breast feeding is one of my fads and I believe it is our duty to foster it and encourage it in every way possible. We must often do so in the face of opposition from the mother, friends, relatives and even our own colleagues, but let us persevere. Let us take as our principle the belief that every mother can nurse her baby and consider that if she does not do so, there is a failure somewhere, just as great a failure as the patient after clean appendicectomy, who dies of peritonitis.

References.

H. C. Cameron: "The Nervous Child."
H. C. Cameron: "Diet and Disease in Infancy."
Eric Pritchard: "Physiological Feeding of Infants and Children."

THE DIAGNOSIS OF SILICOSIS.[1]

By W. Watkins-Pitchford, M.D.,
Director of the South African Institute for Medical Research, Chairman of the Miners' Phthisis Medical Bureau.

At the meeting of the Pan-Pacific Science Congress recently held in Melbourne it was my privilege to address the Section of Hygiene upon silicosis. In Sydney the great honour has been done me to be asked to communicate to the medical profession my views upon some practical aspect of this great industrial disease. I have, therefore, chosen the sub-

[1] Read at a meeting of the New South Wales Branch of the British Medical Association on August 29, 1923.

ject of the diagnosis of silicosis, for it is obvious that such a purely professional matter was not suited for general deliberation by the Congress.

Although a knowledge of the ætiology and pathology of silicosis is of great importance to our profession as a whole, for the practising physician it is still more useful to know how to diagnose the condition with certainty in the living man.

We all know that the simply silicotic chest is specially characterized by an impairment of the normal elasticity and, in complete contrast with emphysema, by a gradual reduction of the power of expansion. We know that these changes in advanced cases may render the chest almost rigid and almost fixed in the position of expiration. We know that practically the only specific auscultatory sign is the thin, high-pitched quality of the inspiratory murmur and we recognize that the co-existence of a tuberculous infection leads to a combination of the signs of simple silicosis with those of pulmonary tuberculosis. It would serve but little purpose to discuss the various physical signs and combinations of physical signs which may be encountered in this disease, for we may learn all that is necessary from the more recent text-books. The important fact to appreciate is that, although the signs to be elicited by inspection, mensuration, palpation and auscultation are always to be found in some cases, they are not necessarily present in all. Moreover, you may occasionally detect many or even all these signs in people who have no silicosis and if, therefore, you trust entirely to ordinary methods of clinical diagnosis you may be very seriously misled. For these reasons one came to the conclusion several years ago—and I very strongly urge you to accept this conclusion—that it is not safe to venture upon a positive diagnosis of silicosis without the assistance of a technically satisfactory radiograph of the chest. In other parts of the world one has sometimes found medical men who were entirely willing to certify that a man is the subject of silicosis as soon as they have satisfied themselves on two points: (i.) that the patient is or has been a gold miner and (ii.) that there is some pulmonary disability. Such a method of arriving at a diagnosis is, of course, open to anyone, whether he be a qualified medical man or not.

The main value of the examination by ordinary clinical means of the possibly silicotic patient is to arrive at an estimate of the degree of disability and to establish a basis for prognosis. Even for these purposes, however, the evidences must in every case be combined with those afforded by a good radiograph. In this connexion it may be laid down as an axiom that unless the radiograph is a good one, its interpretation should either not be attempted at all or only attempted with a definite reservation.

The most satisfactory radiographs of the chest in cases of suspected silicosis are taken when the plate or preferably "duplitized" film is placed beneath the chest of the patient who lies upon it in the prone position, in which the exposure requisite to produce optimum results does not exceed one and a half seconds and preferably one second. The thorax must, of course, be motionless during the exposure and any radiograph in which the upper margins of the ribs appear doubled, must be invariably rejected. When we can see in the radiograph a reproduction of the cancellous structure of the rib we may be satisfied that the chest has been motionless. In addition to this we must assure ourselves that the exposure has not been of such duration or the rays so penetrating as to cause the shadows of the individual vertebræ to appear upon the plate. The heart-shadow should be uniformly opaque and there should be strongly-marked contrast between this and the more transradiant parts of the lung. In this connexion I may state that we have lately found it possible to produce a great improvement in "contrast" by the simple device of doubling the strength of the developer recommended by the manufacturers of the films.

If we adopt the criteria which I have now outlined, we may accept the evidences of the radiograph with confidence, for no lungs which are silicotic beyond the very earliest stage, will fail to yield specific appearances in the negative prepared under such conditions. One's confidence in making this assertion is largely due to the routine of *post mortem* investigation which the provisions of the South African act fortunately facilitate. Our experiences have indeed led us to look upon efficient radiography as an indispensable adjunct, not only to the diagnosis of silicosis, but to the diagnosis and supervision of all chronic diseases of the lungs, heart and great vessels.

The specific radiographic sign of early simple silicosis is a fine, uniformly distributed and symmetrical mottling of both lung areas. I know of no other condition in which this appearance is present. The mottling is of a fine character, however, only in the early stages of simple silicosis. With the lapse of time the individual shadows become larger, less numerous and more widely separated. When a mottling of this coarse type is found, some element of doubt is introduced; for a coarse mottling, although usually the sign of silicosis of many years' standing, may occasionally be due to one form of pulmonary tuberculosis without silicosis or as very rare events to diffuse malignant disease of the lung or to glanders. In these circumstances, however, the mottling is rarely so symmetrical and uniform as in simple silicosis and its true nature is usually disclosed by investigations in other directions.

Unless the specific sign of at least a moderately fine mottling is present in the radiograph it is not safe to venture upon a diagnosis of silicosis. When a miner has been kept under observation for some years prior to the appearance of this specific mottling, it will be found that all the normal shadows of the lung—those due to the hilar tissues, the bronchial and vascular "trees" and the spongework of interlobular connective tissue—are becoming more and more pronounced. Following the code in use in Johannesburg the interpretations of the man's radiographs will be found to have passed from "normal" to "a little more fibrosis than usual,"

"more fibrosis than usual" and finally to "more fibrosis plus." Although this indication of a gradually increasing fibrosis of dendritic type appears to be an invariable preliminary to the development of the specific mottling of silicosis, it is not in itself a pathognomonic sign of the disease, that is to say, it may be due to other causes.

The presence of a tuberculous process complicating a previously simple silicosis, in other words the condition of tuberculo-silicosis, is usually indicated by unsymmetrically disposed patches of shadow in the otherwise uniformly mottled lung areas. This appearance may be due either to tuberculous changes in the depth of the silicotic lung or to patches of that tuberculo-silicotic pleurisy which is so common an accompaniment of the later stages of the disease.

The radiographic signs of tuberculo-silicosis are occasionally closely simulated in consequence of the presence of a tertiary syphilitic lesion or lesions in the silicotic lung. For this reason it is advisable in the interests both of correct certification and prudent prognosis that the Wassermann test should be carried out in all cases.

If a mottling is discovered in a portion of one lung only or if it is distributed with marked asymmetry in the two lungs, it is usually an indication of that condition which I have termed "silico-tuberculosis," a condition in which, from the clinical standpoint, the tuberculous factor appears before and remains throughout greatly in excess of the silicotic factor.

This brief review of the essential points in the diagnosis of silicosis may be concluded by a short reference to the radiographic sign known as the "vertical" or "asthenic" heart. This change in the outline of the heart-shadow—from that of a curvilinear right-angled triangle towards that of a narrow rhomboid—is often found in cases of simple silicosis and even more frequently in cases of tuberculo-silicosis. It is not specifically characteristic, however, of either condition and is encountered in association with chronic cachexias arising from any cause. It is, in my opinion, merely an indication of cardiac atrophy.

AN INTRODUCTION TO THE USE OF "INSULIN."[1]

By James Sprent, M.C., M.B., B.Sc., Ch.B. (Edinburgh), *Hobart.*

The treatment of diabetes has been mainly dietetic hitherto. Drugs have little or no effect on the course of the disease. Pancreatic extracts have been used, but have never come into general use on account of the severe reactions. In 1908 Zuelzer published good results of their use and occasional successes have been reported ever since. The reactions are due to the introduction of foreign proteins and the proteolytic action of pancreatic enzymes.

[1] Read at a meeting of the Tasmanian Branch of the British Medical Association on August 18, 1923.

With the introduction of "Insulin" a new era has opened. This substance contains an anti-diabetic hormone which is the product of the islets of Langerhans in the pancreas. A full account of its nature, action and preparation is given by Professor Macleod, of Toronto, in *The British Medical Journal* of November 4, 1922, the discovery being chiefly due to Banting and Best, of Toronto. Briefly, the history is as follows.

Firstly it was proved that depancreatization of animals produces diabetes. Then it was proved that a subcutaneous graft of pancreas could prevent such occurrence.

This suggested a hormone in the pancreas which was responsible for the proper conversion of assimilated carbo-hydrates. The next step was when it was proved that the isolated mammalian heart, kept alive by perfusing its blood vessels with Locke's solution containing glucose, removed glucose more rapidly from the perfusion fluid when that fluid had been previously perfused through the pancreas. The existence of a pancreatic hormone was then established, but it was not isolated on account of the destructive action of the proteolytic enzymes in the pancreas, such as trypsin.

The problem was to prevent this action of the enzymes. It was known that digestive cells of the pancreas degenerated when the duct was tied, the islets of Langerhans did not.

Banting and Best obtained extracts from the degenerated pancreas which gave much better results in animals than extracts of the whole pancreas.

The next step was to obtain such extracts from the undegenerated gland. Alcohol was used as an extracting medium. This inhibited the proteolytic action and did not affect the antidiabetic hormone. The product thus obtained was then tried on a human being with good result. The method was further improved by Collip who used a method of fractional distillation with alcohol. This method with further refinements is now used.

The unit is calculated by the effect on rabbits, one unit being the amount which lowers the blood sugar of an ordinary-sized rabbit to 0.045 in four hours, this being the point at which serious symptoms appear in the rabbit.

The object of this paper is to indicate the precautions necessary in its use.

Firstly, it is not a short cut to any easy treatment of diabetes. No patient should be given "Insulin" unless his diabetes has proved refractory to dietetic treatment. I have at present twelve patients with diabetes under my control, of whom only two are considered suitable for treatment with "Insulin."

No treatment by "Insulin" should be undertaken unless the practitioner is familiar with:

(i.) The Allen (or starvation) treatment of diabetes;
(ii.) Blood sugar determination;
(iii.) Quantitative estimation of sugar in the urine;
(iv.) Qualitative test for ketone bodies in urine.

Other and more elaborate tests are used in modern clinics for the sake of scientific knowledge, but the above are the essentials.

For details of the Allen treatment I refer you to Hill and Eckman's little book, which gives a series of graduated tables and full dietetic information.

Every practitioner should be familiar with the Allen treatment, which is considered to be the best dietetic treatment at present.

It is found that starvation for from one to three days, with only non-nutritious substances like clear soup and black coffee to stay the pangs of hunger, will remove all sugar from the urine of practically every patient. The diet is then built up on a gradually ascending scale of low carbo-hydrate value. If the starvation is not tolerated, acetone appears in the urine and the art in treatment is so to increase the carbo-hydrate that the sugar remains absent and the acetone and diacetic acid disappear also.

Let it be clearly understood that acetone and diacetic acid in the urine are the danger signals of diabetes. Sugar alone without these is of no immediate danger. If acetone is present, it is well to start treatment by fat-starvation at first; if it appears while the starvation is in progress, fat must be withheld and the carbo-hydrate judiciously increased when the acetone usually goes in a few days.

Nothing is more dangerous than to stop all carbohydrates in a diabetic and to keep him on a carbohydrate-free diet. Acidosis and death is too often the result.

Leaving you to study the Allen treatment at your leisure, I pass to the next essential, a knowledge of the blood-sugar estimation. This I shall proceed to demonstrate. There are other and better methods, but this modification of Lewis and Benedict's method is one which every practitioner can carry out himself and which is reasonably accurate.

I use a long-barrelled tuberculin syringe, finely graduated up to two cubic centimetres and with room for nearly two cubic centimetres more. At three cubic centimetres I have made a mark. The joint of needle and syringe must be air tight and it is wise to coat it with vaseline. Into this syringe I draw up one cubic centimetre of a 2% solution of potassium oxalate. This is to prevent coagulation of the blood. I then draw two cubic centimetres of blood from the median basilic vein in the usual way. The three cubic centimetres of oxalated blood are then passed into a ten cubic centimetre graduated cylinder and made up to ten cubic centimetres with water. To this I add 0.2 gramme of picric acid, shake well together and allow to stand five minutes. This serves the double purpose of precipitating the blood protein and allowing the sugar in the blood to act on the picric acid. This is now filtered with a very small filter paper, as there is not much fluid to spare. Three cubic centimetres of the filtrate are measured and to this one cubic centimetre of a 20% solution of sodium carbonate is added. If you have not got a pipette, use a one cubic centimetre hypodermic syringe. The mixture is then put to heat in a boiling water bath for a fixed time, not less than fifteen minutes.

All the quantities must be very accurately measured. The picric acid is in excess, as is seen in the next step, which is the preparation of the standard. If you own a colorimeter, this is not necessary.

Take two cubic centimetres of a 0.2% solution of glucose and treat it exactly the same way, step by step. This strength of glucose is taken for convenience, it being double the strength of the normal blood sugar in a healthy person fasting; 0.1% would do just as well. A known strength is all that is required.

Now after the expiration of fifteen to thirty minutes I take both tubes from the water bath and calculate by comparison with the known solution. You note that the clear yellow solutions have turned red brown, due to the reduction of picric acid by the sugar to picramic acid and sodium picramate.

Cool both tubes and make each up to twenty cubic centimetres with water in tubes of equal calibre.

Now if the blood solution is darker than the 0.2 standard, dilute the former till the colours match, adding from a graduated cylinder. If it takes twenty cubic centimetres more to break it down, it must be double the strength or 0.4%. If it takes forty cubic centimetres to break it down, making sixty cubic centimetres in all, it must be 0.6%. All intervening fractions follow as on this scale.

Water Added. c.c.m.	Total Quantity. c.cm.	Formula.	Reading.
0	20	$\frac{20}{20} \times 0.2$	0.2
10	30	$\frac{30}{20} \times 0.2$	0.3
15	35	$\frac{35}{20} \times 0.2$	0.35
20	40	$\frac{40}{20} \times 0.2$	0.4
60	80	$\frac{80}{20} \times 0.2$	0.8

In other words the total volume of the diluted specimen divided by one hundred gives the percentage.

If the blood specimen is weaker than 0.2, dilute the known solution until the colours match.

Then if further twenty cubic centimetres are required, it would be half strength or 0.1; if further forty cubic centimetres, it would be one-third strength or 0.067 and our table is constructed thus, intervening fractions following on the same principle (see table on page 386).

This method involves making a fresh standard each time, but gives the added security of knowing that the standard has not faded. It is possible to make up a series of standards of known strengths, if one is doing a lot of such work, but the colours are said to deteriorate rapidly.

Water Added. c.c.m.	Total Quantity. c.cm.	Formula.	Reading.
0	20	$\frac{20}{20} \times 0.2$	0.2
10	30	$\frac{20}{30} \times 0.2$	0.13
15	35	$\frac{20}{35} \times 0.2$	0.114
20	40	$\frac{20}{40} \times 0.2$	0.1
40	60	$\frac{20}{60} \times 0.2$	0.067

For quantitative estimation of sugar in the urine the method for the practitioner is Cawardine's saccharometer. Other methods are used by the laboratory worker, but with very little practice quite an accurate result can be obtained by this method. The instrument costs half a quinea and Fehling's solution is the only reagent. Small amounts below 1% cannot be measured, but it is generally sufficient to know that the amount is so small. This I shall now demonstrate.

For the sake of completeness and at the risk of insulting your intelligence, I shall also show the simple tests for acetone and diacetic acid.

Now armed with this preliminary technique, let us take heed of the warnings of the inventors of "Insulin" and benefit by their experience.

In an article in *The British Medical Journal* of January 6, 1923, the authors give their results in the treatment of fifty severe cases.

They insist upon a week's strict dietetic treatment as a preliminary. If a patient can be kept sugar-free on diet, there is no need for "Insulin." There are two reasons for this.

(1) The supply of "Insulin" is still very limited.

(2) Administration of "Insulin" can reduce the blood sugar to such an extent as to be extremely inconvenient to the patient and even dangerous. The authors quote a case where, following a single injection the blood sugar fell in five and a half hours from 0.278 to 0.073, 0.1 being the normal.

They have found that at 0.07 the patient complains of hunger and weakness, becomes anxious and nervous, losing emotional control. As it falls further vasomotor disturbances and neurotic symptoms occur, with temporary blindness, deafness and phobias, then acute distress and mental disturbance at about the level of 0.05. This may pass into muttering delirium and coma has occurred with a blood sugar of 0.032.

Fortunately this is easily remedied by the administration of orange juice, or of 5 to 20 grammes of glucose in orange juice. In a case of urgency intravenous glucose would be used. It is advisable, therefore, never to give a dose at night when a change may come on during sleep.

The standardization is not yet perfect and the product must be handled carefully. Giving one-unit doses three times a day at meal times is recommended by the subcutaneous route. Some patients require constant treatment, but most acquire greatly enhanced tolerance to carbo-hydrates.

The most striking results have been found in coma, six out of ten being successful and in young children, both classes of cases being previously considered hopeless.

If this article of January 6 is studied with the article of November 4, the administration should be attended with very little danger.

Most other articles in the literature relate to the actual experiments on animals and on the technique of preparation. If the practitioner sticks to these articles, masters the principles of the Allen treatment and follows out the foregoing simple laboratory measures, he ought to feel as safe in the use of "Insulin" as any of his more fortunate colleagues in academic centres.

For those practitioners who have no time to do their own laboratory work, I would recommend the following. Ask your patients to arrive shortly before you leave for your morning visits, they having had no breakfast. Carry out the simple technique above referred to, going only as far as the oxalation of the blood. Then leave your specimens which will only keep good for an hour or two with Dr. Walch, who will do the rest.

Reports of Cases.

THROMBOSIS OF THE SUPERIOR MESENTERIC VEIN.[1]

By K. J. G. Wilson, M.B., Ch.M. (Sydney),
Resident Medical Officer, Brisbane General Hospital.

A.E.F., married, *ætatis* thirty-five, was admitted to the Brisbane General Hospital on June 13, 1923, complaining of severe pain in her abdomen of five days' duration. Her temperature was 38° C. (100.4° F.), her pulse-rate 90 and her respirations 20 in the minute.

History of Illness.

Five days before admission the patient was seized with pain in the upper part of her abdomen. At first it was colicky; it increased in severity and became continuous. She vomited several times and the pain then lessened considerably, so that two days after the onset of the illness she felt almost well. But on the third day the pain came on again with greater severity than before. She vomited many times and in fact could not keep any food down.

After admission the pain was not very severe while she was at rest, but increased in severity on movement. She had vomited last in the morning. Her bowels had not moved for two days in spite of several enemata, one of which was a high enema.

Previous History.

Her appetite had been good. There had been no indigestion nor pain after food. The bowels had been regular.

[1] Being a report of a case read by Dr. A. G. Anderson at a meeting of the Queensland Branch of the British Medical Association on July 6, 1923.

The last menstrual period had taken place two weeks before admission.

Before marriage she had had backache and dysmenorrhœa, but none for three years since birth of her child.

The patient had some difficulty in commencing the act of micturition. She was a thin woman with a flushed face. Her tongue was dry and coated. Her abdomen was considerably distended, chiefly below the umbilicus. There was no movement on respiration and on palpation, slight tenderness below and to the right of the umbilicus. An indefinite mass was felt below the umbilicus. On percussion of the abdomen a tympanitic note was obtained with shifting dulness in the flanks. The other systems revealed no abnormality of note and vaginal examination gave no information of value.

The diagnosis of subacute intestinal obstruction was made with an open mind as to the variety of obstruction. She was prepared for immediate operation and Dr. Anderson operated at 8.30 p.m. on June 13, 1923.

Operation.

Mid-line sub-umbilical incision was made. As soon as the peritoneum was incised, an appreciable amount of fluid escaped, at first clear, but later blood-stained. The small intestine presented at the wound. It was found to be distended, bluish in colour and lustreless. The arteries formed a visible network in its walls, were engorged and raised above the surface of the bowel. Their appearance was quite distinct from that of the blue and cyanotic veins. This appearance was most evident in the upper part of the small intestine, while the bowel gradually resumed its normal appearance a few feet above the ileo-caecal valve. There was no sharp line of demarcation between diseased and healthy portion of the gut.

When the upper part of the mesentery of the small gut was examined, a clearly visible dark swelling was seen at its root. On palpation it proved to be a collection of firm nodular clots in the lumen of the superior mesenteric vein, completely blocking the lumen.

It was decided at this stage to close the abdomen and allow egress to any accumulation of toxic fluid in peritoneal cavity by a pelvic drain. This decision was arrived at on the following grounds: (i.) The fact that it was a venous thrombosis and not an arterial embolism; (ii.) the history of five days' duration showed that the inferior mesenteric vein was receiving the supply of blood from the superior mesenteric artery and was thus taking on the function of the superior mesenteric vein; (iii.) the large amount of small bowel involved.

After-Treatment.

One cubic centimetre of "Pituitrin" was given ten minutes later, followed by a rectal injection of normal saline solution with 5% glucose. She vomited once after the anæsthetic. A considerable amount of blood-stained, serous fluid was discharged from the tube for two days, but gradually lessened and at the end of a week the discharge had ceased.

At end of the second day after operation a simple enema acted well with a formed stool. Enemata were given every second day until the seventh day, when aperients were given by mouth, when necessary. The abdomen remained distended for three days and then gradually subsided.

Fluid diet (water and milk) was given for fourteen days, when the diet was increased to full amount.

Comments.

The following are the chief points of interest of the case:

1. The rarity of the condition of thrombosis of superior mesenteric vein.

2. The intestinal obstruction caused by paralytic ileus.

3. The duration of symptoms before the operation.

4. The gradual recovery *per vias naturales* through the inferior mesenteric vein taking on function of superior.

I am indebted to Dr. A. G. Anderson for permission to report this case.

Reviews.

PREVENTIVE MEDICINE.

In his introduction to the "Practice of Preventive Medicine" Dr. J. G. Fitzgerald who is Professor of Hygiene and Preventive Medicine at the University of Toronto, seeks to outline some of the work of the practitioner whose duty it is to pay attention to the preventive as well as the curative side of medicine.[1] In common with many other leaders in preventive medicine he has realized that further advances in public health are largely dependent on the co-operation of the general practitioner. But unlike other authors who have professedly written with the same object, this author keeps steadily his specific purpose in front of him throughout his book. So true is this, that in reading the section on communicable diseases there is a sense of incompleteness until it is realized that this arises from the omission of details which are unnecessary for the general practitioner, although of vital importance to the whole-time health officer or administrator. This distinction is maintained throughout. In the chapter on water very detailed instructions are given on the points to be observed in procuring and forwarding samples for laboratory examination, because that falls within the practitioner's province. In describing the methods of examination of such examples there is only a generalized though excellent summary of useful information. In the very fine chapter on school hygiene special emphasis is laid on the ways in which the medical practitioner can help school authorities. In that on public health clinics and centres the author thus states his point: "It is difficult to over-emphasize the importance of the physician carrying on public health educational work among his patients. Advice as to how to avoid infection should be given. . . . The occurrence of a case of a cold may be used to illustrate the method of transmission of communicable diseases. No amount of effort by the community through public health workers or officially trained persons will be of any avail, unless the great mass of the people is educated on the principles of healthy living, and desire to cooperate in public health work which is essentially in their own interest. Then too the physician should keep careful case records, however brief they may be. . . Then too the physician must examine patients coming for periodic examinations carefully and thoroughly. They should be encouraged and not treated with amused tolerance."

This attitude, maintained throughout, makes the work one of the most valuable that any medical practitioner can possess. It adds to his every day work a preventive aspect. It is especially valuable for the country practitioner. In a special section the author recognizes the defectiveness of community hygiene in rural centres and makes suggestive remarks on the rôle of the medical adviser in such districts.

The information throughout the book is reliable, up to date and presented in an attractive manner. The chapter on food contains excellent advice on food values and the author is careful to avoid extreme views in the discussion of the much debated question of diseases caused by deficiency of accessory food factors. This sanity of outlook coupled with up to date information and suggestive ideas characterizes the book throughout.

The section on communicable diseases is well arranged and use is made of the modern classification of these diseases according to their mode of dissemination. The chapter on venereal diseases is thoughtful and well balanced and additional valuable information on venereal clinics is given in one of the many useful appendices. The diarrhœas and dysenteries are admirably discussed. "An outbreak of acute enteritis, especially among young adults may be

[1] "An Introduction Into the Practice of Preventive Medicine," by J. G. Fitzgerald, M.D., F.R.C.S., assisted by Peter Gillespie, M.Sc., C.E., M.E.I.C., and H. M. Lancaster, B.A.Sc., and chapters by Andrew Hunter, M.A., M.B., F.R.C.S., J. G. Cunningham, B.A., M.B., D.P.H., and R. M. Hutton; 1922. St. Louis: C. V. Mosby Company; Royal 8vo., pp. xx. + 826, with 129 illustrations. Price: $7.50 net.

an epidemic of bacillary dysentery. If a large number of persons are passing stools containing blood and mucus, or both, bacteriological or serological examinations should be made. . . . Pending this, persons who are passing such stools should be isolated. . . . Carriers should be carefully sought for." The importance of driving this home to the medical profession in Australia has been emphasized by recent researches. For this and other reasons the author would make "infantile diarrhœa" a notifiable disease.

A very valuable feature of the book is the statistical tables, in that they have special reference to Canadian conditions, which are not usually so easy of access as are those of Great Britain and the United States. These tables and graphs, the comparative tables for other countries, the charts in the comprehensive chapter on industrial hygiene, the chapters on vital statistics, on public health organization and on public health education and the ten appendices containing legislation, regulations and outlines of various health organizations contain a mine of valuable information. It is refreshing to learn that the province of Ontario and its capital city of Toronto spend about 2% of their total revenue on public health activities and find that it pays. The figures given in the chapter on pulmonary tuberculosis, showing that a ten years' comprehensive campaign against tuberculosis in Toronto has reduced the mortality rate for that disease by from 124 to 65 per 100,000 of population, are startling and encouraging. The figures on maternal mortality show the same lack of decline that is deplored in Australia. The figures for still births give substantially the same results as Holland's recent investigations in England and re-emphasize the need for ante-natal supervision and better obstetric training of medical students. These facts will show the value of this work to public health administrators. It should be on the shelves of every medical practitioner, whether he is in general practice or in an official position.

PSYCHOLOGICAL PROBLEMS.

SOME three or four years ago Professor Pear of the University of Manchester delivered a series of lectures to the officers of the Royal Army Medical Corps at the Maghull Military Hospital on the psychological explanation of memory and kindred matters. These have now been amplified and supplemented and are published in book form under the title of "Remembering and Forgetting."[1] Although the author modestly disclaims having broken any new ground, he has at least directed attention to new aspects of psychology. The opening chapter deals with an explanation of memory; it is supported by appropriate analogies and illustrated by utilizing, in a most convincing way, a comparison with the process of preparing a gramaphone and reproducing the results. As the material and apparatus for so doing must have certain qualities of excellence for efficient recording and reproduction of impressions, so also must the neural conditions contain the requisite quality of material. The impaired or senile brain is compared with the cracked or worn-down record. The author discusses control of memory and holds that exactitude of recall is impossible. "A good memory should be serviceably selective. To good remembering, as to good art, leaving out the right things is indispensable. The art of forgetting is but the inner aspect of the art of remembering."

The author proceeds to the subject of the apparatus of remembering, and discusses after-sensations and after-images and the psychology of imagery, spontaneous and voluntary. He points out the wide range which this subject covers, since it is concerned not merely with visual and auditory but with all the numerous sense-organs. Perception and sensation are most admirably dealt with and analogies are freely utilized to make the author's meaning vivid; in fact, throughout the book this is so happily effected that the reader who is unacquainted with psychological literature, may read it with mental comfort and enjoyment. The chapters on the function of the image are treated in a manner that renders them particularly interesting. Since the modern psychologists beginning with Freud first published their theories and the results of their investigations, no part of them was so absorbingly fascinating as the study of dreams and their interpretations. Few, if any investigators in this realm will at this time of day disallow the fact that dreams are merely re-assembled memories, distorted or displaced, as may be; consequently the modern study of dreams, their mechanism and analysis, justifies its presence in a work bearing the title of this publication and occupies about one-fourth of the book. The reader will not intentionally miss one word of this, nor of the example (a dream by the author in 1915) selected for an elaborate analysis. A slight disappointment to medical readers will be that the dream so chosen did not contain a psychopathic aspect. The author maintains the fascinated interest of the reader in the succeeding chapter on forgetting and subscribes to the Freudian view of repression. He shows by explanation and illustration how forgetting is a definitely active process, not explainable by matters of chance, but the complement of the "selectiveness" of memory. Rivers's distinction between suppression and repression and his theories thereon are explained and discussed and his valuable investigations are appreciatively recognized. In a short chapter on synæsthesias—those remarkable phenomena in which "a group of sensations are accompanied by, or evoke other sensations"—that of coloured hearing is described and explained and readers who have an intimate acquaintance with music and musicians, will appreciate the psychological explanation regarding the composer or listener who sees or feels certain colours with certain notes, keys or compositions. Similarly, coloured seeing and other synæsthesias are touched upon. The visualization of a number by an extraordinary method of imagery, which was originally described by Sir Francis Galton as "number forms," a gift which is said to be possessed by some 6% of people, is fully described and partly illustrated. Some of the points in this chapter are, perhaps, not as vividly clear as the rest of the work, but all are interesting. Kinæsthesia—a "sense" wherewith the feel of bodily movements and posture is made known—is the subject treated in the chapter on the intellectual respectability of muscular skill. The publication concludes with a brief reference to certain experiments on the nervous system by Head, Rivers and others. The book is interesting and admirable, it is well produced and is a clear presentation of the views of the author.

[1] "Remembering and Forgetting," by T. H. Pear, M.A., B.Sc.; 1922. London: Methuen & Company, Limited; Cr. 8vo., pp. xii. + 242. Price: 7s. 6d. net.

NURSERY GUIDE FOR MOTHERS AND NURSES.

THE "Nursery Guide for Mothers and Nurses" by Dr. Louis Sauer in the words of the author "is intended to aid those to whom are intrusted the care and feeding of infants."[1] In the chapter on general care and development so much ground is covered in such small compass that it makes uninteresting reading for mother or nurse. The chapter on breast feeding contains helpful directions—four-hourly feeding being recommended for babies of average weight. Recipes are given in the text for protein milk, eczema soup and malt soup. Protein milk is recommended for use in the feeding of premature infants. These directions hardly come within the scope of a book intended as a guide to mothers and nurses.

There are chapters on some common ailments, the care of sick children and on poisons and their antidotes.

On the whole the impression left by the perusal of this little book is that in attempting to give much information the author has lost sight of the object for which it was written and has thereby impaired decidedly its usefulness.

[1] "Nursery Guide for Mothers and Nurses," by Louis W. Sauer, M.A., M.D.; 1923. St. Louis: C. V. Mosby Company; Crown 8vo., pp. 188, with twelve illustrations. Price: $1.75.

The Medical Journal of Australia

SATURDAY, OCTOBER 13, 1923.

The Registration of Nurses and Midwives.

Nine years ago the attention of our readers was directed to the need for a statutory control of the nursing profession in all parts of Australia. State registration of nurses had been introduced in Queensland. A resolution was adopted on November 12, 1914, by the Victorian Branch of the British Medical Association to the effect that similar legislative provisions should be adopted in Victoria. In New South Wales the medical profession had given its support to a bill introduced by Sir Charles Mackellar into the Legislative Council in 1910. In the other States the opinion of the medical profession was strongly in favour of this measure. Notwithstanding this general demand by the medical profession and an equally emphatic demand on the part of the nurses themselves, nothing has been done. The arguments in support of State registration of nurses have been put forward so often that their repetition would seem to be redundant. The public must be protected from the charlatan and the uncontrolled person. It is not enough to place confidence in voluntary organizations like the Australasian Trained Nurses' Association and the Royal Victorian Trained Nurses' Association, even though these estimable bodies have done wonderful work in maintaining a high standard of efficiency in nursing without any legislative authority. The disciplinary control of a statutory body clothed with the power to suspend from practice or to cancel the registration for serious professional offences or shortcomings is a more effective weapon against incompetence and the graver forms of professional misconduct than any rules of a private association. In the next place the adequately trained nurse who practises her profession in virtue of a statutory registration, is protected against unfair and unjust competition in a manner that does not obtain when the trained nurse merely possesses the certificates of the voluntary societies. The value of State registration of nurses to the persons employing them, to the nurses themselves and to the healing professions generally has long been recognized. In 1919 an act was passed in England and Wales for the registration of nurses. This measure is very similar to the many bills that have been introduced to the Imperial and State Parliaments during the past twenty years. There is a clause providing for the establishment of a General Nursing Council. This body, like the General Medical Council, has the duty of keeping the register and is empowered to remove names from the register. It is modern in one respect. The act itself is skeletonic and the greater part of the machinery needed to enable the General Nursing Council to perform its functions is not included, but is set out in the rules. These rules are rules of the Council and not regulations under the act. They have to be submitted to Parliament before they become effective. The English act contains a provision of particular moment to nurses trained in Australia. A nurse trained outside the United Kingdom can claim the right to be registered under this act if she has been registered in a similar manner in the State in which she was trained. A nurse who has received her training in Sydney and who has obtained the certificates of the Australasian Trained Nurses' Association recently applied to be registered under the English act. She has acted as Matron-in-Chief of the British Red Cross Society hospitals in France throughout the period of the war. She had received the Order of Saint John of Jerusalem in England. She is now a member of the Royal Red Cross. This lady, Miss Nora Fletcher, is not allowed to sit for an examination under the act nor can she be registered unless she passes through the complete curriculum prescribed by the General Nursing Council. She could be registered if New South Wales had State registration of nurses and if she obtained registration in New South Wales where she was trained.

The question of the registration and supervision of midwives is even a more urgent one. The arguments in favour of this measure have been dealt with in these columns on many occasions. As far as we are aware there is no opposition to the pro-

posal, while all those interested in the subject support it whole-heartedly. And yet nothing has been done!

There is another aspect of this matter that should not pass unmentioned when the authorities are being urged to provide adequate safeguards for the public weal. It has long been felt that independent registration of medical practitioners in the several States of the Commonwealth is both clumsy and disadvantageous. The six Medical Acts in force at present are far from uniform. Moreover, experience has taught that a clever imposter may succeed in cheating a medical board after previous experience of other boards. The same objections apply to the registration of nurses. If the State authorities could agree to hand over this small matter to the Federal authority, a signal advantage would be gained. A nurse trained in any of the recognized schools in the Commonwealth would have her name inscribed on the Australian register and would be able to enjoy the privileges and protection of registration throughout the Commonwealth and in the United Kingdom. There are indications that the artificial distinctions which have existed for some time between nurses holding the certificates of the Australasian Trained Nurses' Association and those holding the certificates of the Royal Victorian Trained Nurses' Association, are being overcome. A *rapprochement* at this stage, leading to the general recognition of the training given in all the great teaching hospitals of the capital cities, would do more to consolidate and strengthen the nursing profession in Australia than anything else. If State registration of nurses is to be introduced in every part of Australia, it would be immeasurably more valuable if the conditions of admission to the register were the same in all parts and if the recognized uniform and badge and the letters appended to the name of each registered nurse were the same in all States. The English act contains provision for the infliction of a penalty for the unlawful assumption of the title of "registered nurse" or the wearing of the prescribed uniform or badge by anyone who has not been admitted to the register. A similar provision would be required for the protection of the public and of registered nurses in any legislative enactment that might be introduced in Australia. It is therefore to be hoped that State registration of nurses and midwives will be introduced without further loss of time as a measure of protection of the public and that there may be one controlling body and one register for the whole Commonwealth for nurses and one for midwives.

Current Comment.

BASAL METABOLISM IN GRAVES'S DISEASE.

The estimation of the basal metabolic rate has been used by many clinicians during recent times in Graves's disease. It is claimed that in atypical forms of the disease the discovery of an increase in the basal metabolic rate permits a definite diagnosis to be made. Furthermore these estimations are held to be valuable in controlling the results of the various forms of treatment. In The Medical Journal of Australia of December 16, 1922, Dr. R. L. Thorold Grant published a careful record of his studies at Saint Bartholomew's Hospital and established his contentions in regard to the value of the estimations in exophthalmic goître. It is remarkable that in the discussion that followed the reading of this excellent paper before the South Australian Branch of the British Medical Association, the remarks were directed almost exclusively toward the significance of the estimations in the treatment of the disease. Studies of this kind have greater utility when the findings are considered in relation to the pathology and biochemistry of the affection. It is recognized that the basal metabolism is considerably increased in persons suffering from diabetes, leuchæmia, primary anæmia and some bacterial infections. In diabetes as in exophthalmic goître the study of the alterations in the processes of metabolism are of fundamental importance in view of the fact that the mechanism of the primary lesions is still obscure. In both diseases the glands of internal secretion are involved in the pathological process. Until much more has been learned concerning the physiology of the hormones under normal conditions, the doctrines of the production of the symptom complexes in exophthalmic goître and *diabetes mellitus* must remain speculative.

Dr. C. C. Sturgis has carried out an elaborate study of the basal metabolism of a woman suffering from severe exophthalmic goître and draws some conclusions from his observations.[1] The estimations were made on one hundred and ninety-two consecutive days and were correlated with the records of the pulse-rate during resting, with the food intake and the body weight and with the occurrence of menstruation. In addition the author has made a close study of the effect of an acute febrile attack of five days' duration on the basal metabolic rate and he has watched the results of various forms of treatment. It is unnecessary to refer in this place to the details of the patient's illness, since the

[1] *Archives of Internal Medicine*, July 15, 1923.

individuality of the patient and the peculiarities of her personal response to the essential lesions of the disease militate against applying observations made on one person generally to all people suffering from the same disease. Notwithstanding this limitation of the utility of his extensive studies, certain observations are of obvious importance. In the first place, when the patient first came under observation her nervous condition, apprehension and general instability were evident. For eleven days the metabolic rate manifested considerable fluctuation. The first reading was very high; on the following day it had fallen 33%. Between the tenth and the eleventh days the fall amounted to 23%. The author points out that no two readings would have revealed the extent and nature of the daily variations. In brief it may be said that it took eleven days for the patient to reach stability while at rest in bed in a well managed stitution. During the following one hundred and twenty-three days the basal metabolism remained remarkably constant. On three occasions only was there more than 10% difference between the estimations carried out on successive days. The author discovered that even these three unusual variations followed some emotional disturbance. In the next place he found that, while there was some correlation between the metabolic rate and the pulse rate during rest, the correlation between the metabolic rate and combination of pulse rate and pulse pressure was even more evident. Several observations are needed before the ratio between the pulse rate and the metabolic rate can be determined.

In the next place some important observations were made in regard to the food consumption, the expenditure of energy and the body weight. Patients suffering from exophthalmic goître frequently devour large quantities of food and yet manifest a decrease in body weight and nitrogen retention. Dr. Sturgis's patient did not consume a large diet until urged to do so. Her output of energy is estimated from her basal metabolic rate with 10% added for the specific dynamic action of food and 15% added for movement. During a period of twenty-eight weeks the patient's diet yielded a daily average of 3,953 calories. The average expenditure of energy, that is the metabolic rate with 25% added as indicated above, was 2,349 calories. This yielded a difference of 1,604 calories to be accounted for by the loss of food not absorbed from the intestinal canal but passed in the fæces, by protein and fat stored but not burned and by the effect of additional movements which are arrested during the period while the estimations are being made but which continue through the remainder of the day. After discussing these items in detail, Dr. Sturgis arrives at the conclusion that the estimate of 15% as an allowance for movements while in bed is totally inadequate. Basing his calculations on the readings on the whole period of one hundred and ninety-six days he finds that an allowance of 64% must be made for movements while at complete rest in bed. The significance of these calculations becomes apparent when the caloric intake of patients with Graves's disease is compared with that of normal individuals. Dr. Sturgis's patient, who was not exceptional in this respect, consumed a daily diet over a period of fifty-six days having a daily average equivalent of 5,254 calories. She gained 11.7 kilograms in weight during this time, reaching 56.5 kilograms. A man weighing seventy kilograms requires between 3,362 and 4,150 calories to enable him to perform hard work. Closely associated with this is the effect of the acute febrile affection. During the five days of fever the patient's appetite failed. She lost 2.61 kilograms of body weight as a result of a diminished intake of food, her daily average amounting to 1,199 calories, and of an increased expenditure of energy from the raised temperature of the body.

These observations are highly suggestive and seem to indicate the direction of further research into the association of a disturbance of the function of the glands of internal secretion and the expenditure of energy. It is surprising to find that in his patient Dr. Sturgis was unable to detect any alteration of the basal metabolic rate during the menstrual cycle. It is true that his observations are limited to one patient and to the study of five uninfluenced periods. The patient menstruated once during the eleven days following admission and once immediately after a surgical intereference. He excludes these two observations on account of the psychic effect of the concomitant occurrences. The fact that menstruation on five occasions apparently had no influence on the basal metabolic rate requires confirmation and further study before it can be understood.

CONGENITAL ILEO-CAECAL CYSTS.

Among the conditions which may be associated with and stand in causal relationship to intussusception is that of congenital ileo-caecal cysts. Although such cysts do not necessarily produce an intussusception, the association of the conditions is relatively frequent. Dr. H. F. MacAuley has recently reported an instance of this association.[1] The patient was a baby, aged six months, who was brought to hospital with the usual signs and symptoms of intussusception. After reduction of the intussusception a hard knob-like structure was palpable. The interior of the cyst was lined by ordinary intestinal mucous membrane and no communication existed with the lumen of the bowel. Dr. MacAuley records several instances from the literature. The histories reveal that, although not always associated with intussusception, the condition has generally been mistaken for intussusception after laparotomy. No adequate reason has been found for the frequent occurrence of cysts at the ileo-caecal angle. Congenital cysts must be distinguished from those which are really localized dilatations of the wall of the colon. Keith has stated that these congenital cysts have no morphological significance and that they arise in the latter part of the second month of development as extensions of the epithelial lining of the bowel.

[1] *The British Journal of Surgery*, July, 1923.

Abstracts from Current Medical Literature.

BACTERIOLOGY AND IMMUNOLOGY.

Serological Factors of Natural Resistance in Animals on a Deficient Diet.

GEORGE H. SMITH AND ISOBEL M. WATSON (*Journal of Immunology*, May, 1923) compare the sera of normally fed rats with those maintained on a rickets-producing diet. The correlation between deficient diet and morbidity and mortality rates from intercurrent infection suggested to these workers the probability of impairment of the mechanism of resistance under conditions of inadequate nutrition. Three factors were taken as giving an index of natural resistance—complementary activity of the serum, bactericidal action of the serum and the ability to stimulate phagocytosis with heterologous leucocytes. The animals used in the experiments were rats. The sera from the animals which had been maintained on a rickets-producing diet, manifested certain differences when compared with sera from normally fed animals. The prominent feature is the difference in bactericidal titres, values for the most active sera among rhachitic rats being well below the lowest values for normal animals. The complement titrations vary but little while the phagocytic indices appear in general somewhat lower among animals fed on deficient diet.

Disinfection of Hides and Skins for Anthrax.

E. F. PIKE (*American Journal of Hygiene*, May, 1923) gives an account of investigation undertaken with a view to finding a satisfactory method of disinfecting loosely piled dry skins and hides or preferably skins in bales, and to devise a more satisfactory and reliable method of disinfecting skins in the tannery. It was recognized that any method for the disinfection of skins and hides must disinfect completely, must leave tannable skins, be mechanically feasible and of reasonable cost. A series of gaseous disinfectants was first tested by exposing asbestos wicks or silk threads covered with anthrax spores to the vapours liberated into bell-jars containg moist air at reduced pressures. Hydrochloric acid, bromine, phosgene, chlorine, trichlorethylene, sulphur dioxide, carbon tetrachloride, ammonia, iodine and iodine with carbon tetrachloride were tried with varying conditions as to pressure, temperature and length of exposure. Of these iodine was found to be the most reliable. Later experiments were carried out in chambers capable of accommodating whole goat skins so that any interference with the qualities necessary for satisfactory tanning might be observed. In the light of these experiments two methods are recommended in both of which iodine is used. (i.) Vapour disinfection: Circulation of the iodine vapour generated outside the chamber is achieved by means of suction or suction and pressure combined. A temperature sufficient to prevent the deposition of iodine is maintained by means of a steam coil within the chamber. The iodine vapour as it emerges from the chamber is treated with a view to recovering the iodine for further use. After exposure to the vapour the hides are soaked in thiosulphate for a short time to remove the iodine, rinsed and placed directly in the lime pits. (ii.) Liquid disinfection: In this method iodine is dissolved in water or in an easily volatile solvent such as carbon tetrachloride. Mechanical shaking is necessary for the satisfactory carrying out of this method, the hides being subsequently decolorized with thiosulphate. It was found that 0.5% iodine in carbon tetrachloride solution killed all spores in two hours with a one to nine ratio of skins to solution.

Rocky Mountain Spotted Fever.

HIDEYO NOGUCHI (*The Journal of Experimental Medicine*, March, 1923) records experiments undertaken to produce an immune serum of sufficient potency to be efficacious in the treatment of human beings infected with the virus of Rocky Mountain spotted fever. He states that Ricketts and Gomez had found that the serum of guinea-pigs which had recovered from the disease, would protect normal guinea-pigs from infection when administered two or three days after the injection of the infecting virus. The strength of the serum was such that 0.3 to 0.5 cubic centimetre were required to protect against one cubic centimetre of the virus, but they concluded that the usefuiness of the serum in human beings would be practically nil, since the amount required when translated into terms of human body weight would be prohibitive. Noguchi found that the neutralizing power of the serum is considerably increased by one or more subsequent inoculations of the virus in citrated blood into the convalescent guinea-pig. Sera prepared in this way are capable of modifying the course of the disease so that it will assume a non-fatal form, or in some instances of suppressing the infection completely, provided the serum is administered during the incubation period. The rabbit was found to be susceptible to the virus of spotted fever and was used for the preparation of the serum. If recovery after infection takes place, the animal becomes completely resistant to subsequent infection and 0.5 to 0.1 cubic centimetre of its serum collected two weeks after disappearance of symptoms is capable of rendering non-fatal an infection produced by one hundred minimum lethal doses of the virus. The animal tested was the guinea-pig. By another intravenous injection of virulent blood the potency of the serum can be raised five- to ten-fold and in some instances to such a titre that 0.1 cubic centimetre will neutralize one thousand minimum lethal doses of the virus. The reinforcing injection is given two weeks after complete recovery of the animal and the animal is bled nine days later. A serum is sufficiently potent for practical purposes when a dose of 0.1 cubic centimetre is capable of neutralizing one hundred minimum lethal doses of virus. The immune rabbit serum prevents the development of the infection or renders it non-fatal if administered within the period of incubation—the earlier the administration of serum the more complete the suppression of the infection. As to the usefulness of such an immune serum in human infections the relative susceptibility of man and the guinea-pig must be considered and these have been found to be practically equal. The author, therefore, recommends that in every instance in which the bite of a tick gives reason to suspect a possible infection with spotted fever, or in which a person accidentally inoculates himself with the virus, 0.2 cubic centimetre per kilogram of body weight be injected immediately, preferably by the intravenous route. For the average adult the dose should be sixteen cubic centimetres.

Coagulation and Sterilization of Löffler's Blood Serum under Steam Pressure.

A. J. HINKLEMAN (*Journal of Bacteriology*, July, 1923) describes a process of coagulation and sterilization of blood serum by means of which an ivory-white medium free from bubbles and assured of sterility may be secured. A sufficient amount of blood is collected in a sterile container so that the desired amount of serum can be obtained within two or three hours of clotting. As soon as possible after collection the blood is set in a refrigerator to prevent the multiplication of such contaminating organisms as may have gained entrance during the process of collecting. The serum is poured off from the clot into a sterile flask and centrifugalized to remove any red cells present. The proper proportions of serum and glucose broth are now made up and the medium distributed in sterile tubes of uniform length which are firmly corked. The tubes are placed in a specially constructed metal rack with a cover capable of being securely fastened down on the corks to prevent them blowing out when the air within the tubes begins to expand as a result of heating. The rack is so constructed that it may be placed in a tilting position giving the tubes any slant desired. The rack is placed in the autoclave and pressure allowed to rise at the usual rate up to 4.5 kilograms when the heat is turned off. By this method of coagulating the media in completely sealed tubes the expansion of the air and consequent rise of pressure within the individual tubes will prevent the formation of any bubbles.

HYGIENE.

Labour Turnover and Industrial Accidents.

Harry D. Kitson and Claude Campbell (*The Journal of Industrial Hygiene*, July, 1923) state that it is generally agreed that the first step towards the reduction of accidents is the discovery of causes. These have been tabulated variously, such as the object causing the accident, the nature of injury, hour of day and day of week. Some classifications are physical, others are personal. Latterly the personal group has received attention owing to the fact that since the installation of safety devices the accidents directly traceable to conditions within the control of the worker are more prominent. Indeed, it has recently been estimated that they constitute 90% of all accidents. Speed in production has been found to be one correlative factor, fatigue is considered as another, while the authors deal with inexperience of beginners as still another. Owing to the cooperation of those controlling several very large industrial undertakings the authors had access to a large amount of excellent data. Their conclusion is that the number of accidents vary as the number of new employees. This was found to hold true in all instances and one example is given. With an average working force for the first year of 2,498 and for the second of 2,417 there was nevertheless 2,130 accidents for the first year and 1,486 for the second; the numbers of new employees during these two years were 1,415 and 761 respectively. Further figures indicated that accidents occurred among all employees with a ratio of one accident to every four employees, whereas they occurred among new employees with a ratio of one accident to every hired employee. The authors suggest that in order to reduce the number of accidents the turnover should be reduced. If the new employees were zero the number of accidents would probably be reduced by 75%. They further suggest that when the costs of turnover from items such as spoiled work, damaged machinery *et cetera* are computed a percentage should be deducted from amounts paid in settlement for accidents. They hold that an increased amount of time spent in instructing new employees might aid materially in reducing the number of industrial accidents.

Metal Fume Fever.

F. Kallasch (*The Journal of Industrial Hygiene*, June, 1923) writes that in a copper-rolling mill complaint was made of fever and gastric disturbance among the employees. The work consisted in rolling red-hot glowing ingots of pure copper. In order to cool the rolls water allowed to drip on them readliy vaporized. While rolling the breaking off of tiny particles of copper was unavoidable and these particles passed into the atmosphere as dust and were carried about in the droplets of steam. Strangely, however, although on the roof beams considerable quantities of very fine copper dust were found, the way in which this dust acted did not conform to general experience in regard to inhalation of copper dust which causes local mechanical irritation with coughing. The author states that in this copper mill at the end of the day the men complained of oppression in the chest, shivering, nausea, vomiting and pains in the body to such an extent that they were compelled to go to bed. After a night of sweating the symptoms disappeared except for lassitude. More detailed observations revealed an increase in pulse-rate from ten to fifty beats per minute, a rise in temperature to 0.5° C. and an increase in the blood pressure. The author points out the similarity between this condition and that seen in brass founders' ague. The latter complaint does not result from the simple inhalation of zinc dust, but is a question rather of the formation of a new chemical compound, an oxide, as the active agent. It is considered that the very fine state of division of the oxide produced in the pouring and its absolute dryness are the properties which make it possible for the particles to penetrate deeply into the lungs where they are absorbed. It is then pointed out by the author that copper and zinc are not the only metals which stand alone in the foregoing, as it has been shown that mercury, nickel and probably other heavy metals when inhaled in vaporized form cause symptoms similar to brass founders' ague. Although the question as to how the symptoms are resolved in the body is not settled, the author draws attention to the obvious resemblance to anaphylactic shock. This points to destruction of the delicate cell membrane of the air passages, its alteration by protein into the organism with rise of temperature. Naturally, considerable quantities of particles in dust form must be swallowed and in the stomach lead to both local and general symptoms. A remedy may be supplied by sufficient exhaust ventilation of the rolling rooms.

Practical Mental Hygiene in Industry.

F. W. Dershimer (*The Journal of Industrial Hygiene*, May, 1923) describes mental hygiene as that branch of medicine which has as its object the preservation of mental conditions which may endanger or are endangering either the mental or the physical health of individuals, or both. At present mental hygiene is being introduced in industry under a protective colouring which is necessary in order to avoid the antagonism of employees. Under its heading may be included all the service work done in industry. Another type of mental hygiene which is now quite common in industry is that having to do with environment. Clean, light and well ventilated factories, recreation facilities, comfortable rest rooms, music, cafeteries and factory newspapers, all these have their place in promoting the mental health of employees. The author points out that mental hygiene should begin with the engagement of employees, for there is no doubt that the medical practitioner can do much to prevent applicants being accepted who are unfitted because of nervous or mental conditions. The author has not yet been able to exclude other than gross conditions. He points out that the emotional life of the factory employee is as varied as that of other individuals. The part played by emotions varies inversely with the degree of intelligence. In direct relation to the degree of contentment which in turn depends upon the mental adjustment to the problems of life, there occur either smoothly running machines or revolt. In industrial groups, as in any other large group of people, it will be found that these degrees of adjustment and their results shade into each other as follows: At the top perfect adjustment, contentment and efficiency; midway restlessness and unhappiness; finally complete failure in adjustment leading to disease and outwardly to revolt. Once the environment is made satisfactory every effort should be made to discover dissatisfied employees to ascertain their problems. After their condition is learned an endeavour should be made to remedy it either by aiding them to compromise in hobbies or other satisfactory outlets for misdirected or lost energy or by explaining it to them and encouraging them to face it with courage. The author then proceeds to give in detail notes on several patients who were observed. In several instances psycho-analysis had to be employed. He then proceeds to explain that even in connexion with accident surgery there is a wide field for mental hygiene. The length of the period of disability after an accident depends far more on what the patient thinks about his injury than on the actual resultant physical condition. Mental states such as anger and fright may enter as factors in increasing the length of disability. As instancing mental hygiene in industry he refers to an instance in which many precautions were justified because of the seriousness of injury to a patient's back from a legal standpoint. A girl, aged twenty years, received an injury to her back through another girl pulling a chair away as she was about to sit down. She was very angry when she saw the medical practitioner who carefully examined her. He found no serious injury. She was then sent in the company car for an X-ray examination. No abnormality was found and she was then driven home. The car brought her to the dispensary next day and the results of these examinations were explained. She was informed that the other girl had been strongly reprimanded. She was given a day off duty and then resumed duty as usual.

British Medical Association News.

SCIENTIFIC.

A meeting of the New South Wales Branch of the British Medical Association was held at the B.M.A. Building, 30 to 34, Elizabeth Street, Sydney, on August 29, 1923, Dr. C. H. E. Lawes, the President, in the chair.

Silicosis.

Dr. W. Watkins-Pitchford gave a demonstration on the causation and nature of miners' phthisis and concluded by reading a paper entitled "The Treatment of Silicosis" (see page 382). The main facts included in the demonstration have been summarized in the record of his paper read before the Hygiene Section of the Pan-Pacific Science Congress (see The Medical Journal of Australia, September 29, 1923, page 325). Dr. Watkins-Pitchford exhibited a large number of admirable lantern slides illustrating the pathological changes induced by the absorption of silica particles of moderate size by the "dust cells" of the lung. Other slides depicted the result of a tuberculous infection grafted on the silicotic lung. He also displayed a series of excellent skiagrams of chests to demonstrate the points in the diagnosis of fibrosis of the lung due to silica and of pulmonary tuberculosis associated with fibrosis.

Professor H. G. Chapman said that he had had great pleasure in listening to Dr. Watkins-Pitchford's admirable address. It had been particularly interesting to him, because he had been engaged in an investigation of a somewhat similar nature at Broken Hill. He pointed out that there was a considerable difference in the chemical composition of the dust from rock in Broken Hill as compared with the Joplin district, with the Witwatersrand mines and with the mines in Missouri. This difference had necessitated some modifications in the methods of investigations carried out by Dr. J. H. L. Cumpston in Kalgoorlie and by Dr. Walter Summons in Bendigo. The conditions in both places were closely similar to those in Witwatersrand. Moreover, the evidence they had gained in connexion with the workers in the Hawkesbury sandstone, revealed conditions similar to those found in the Rand miners. The clinical picture of the affected miner at Broken Hill was different from that described in text-books under the heading of miners' phthisis. A Royal Commission had examined the question of the health of the miners in Broken Hill in the year 1914 and had arrived at the conclusion that there was no risk of silicosis and practically no tuberculosis in Broken Hill. It was readily understood how it was that they had arrived at this conclusion. The Royal Commission had taken evidence but had not carried out any investigations. The medical practitioners in Broken Hill had arrived at the opinion that there was no silicosis because the clinical signs regarded as classical were not present in the miners. There was no dyspnœa and no evident impairment of the motility of the chest. The first important finding was the evidence collected by Dr. G. H. Burnell during the *post mortem* examinations on men who had worked in the mines. He had seen pea-like nodules scattered throughout the lungs and had formed the conclusion that dust had been deposited in the alveoli. When the Technical Commission of Inquiry had attacked the problem, they had found that the radiographic method was capable of revealing much pneumonoconiosis. Their investigations had shown that out of nearly four thousand miners nearly two hundred manifested signs of some fibrosis. The microscope, however, had given them a picture very different from the microscopical sections that Dr. Watkins-Pitchford had projected on to the screen that evening. The absence of impairment of motility of the lung was explained by the histo-pathology of the specimens. The amount of air taken into the lungs was not much less than the normal amount. But they had found that there was a definite increased liability to a tuberculous infection. Among the three thousand men examined, sixty were found to have pulmonary tuberculosis complicating pneumonoconiosis. In other words the underground workers at Broken Hill manifested twenty times greater liability to tuberculosis than the general population. Whether the pneumonoconiosis was always entirely due to silica was not yet quite certain. Less than 20% of the men were affected. While the lode in the Broken Hill mines varied considerably in composition, the rhodonite ore contained a higher siliceous content than the calcite. They had ashed the lungs of miners who had died, and had found silica, manganese, lead and zinc in the ash. He was not able to subscribe to Dr. Watkins-Pitchford's contention that silica alone could cause pneumonoconiosis. It was strange that notwithstanding the facts that the lung ash contained silica and that all the miners at Broken Hill inhaled silica, the incidence of pneumonoconiosis was relatively low.

They were about to take Dr. Watkins-Pitchford to Broken Hill where they would be able to benefit from his great experience. Dr. Watkins-Pitchford had blazed the track they had been able to follow. He thanked him for his instructive address.

Dr. R. R. Sayers, the Chief Surgeon of the United States Bureau of Mines, congratulated Dr. Watkins-Pitchford on his excellent exposition of the subject of silicosis. He had learned much from him and from Professor Chapman and had very little to add to the discussion. Much work had been carried out in the United States of America in connexion with the health of underground miners. The conditions in the mines varied greatly. The mines were scattered over large areas of country. Investigations had been carried out at the request of the mining companies. They had found that as the chemical nature of the ores varied, so the clinical manifestations also varied. Where silica was present in small quantities, the incidence, severity and significance of silicosis was less manifest than where quartz was being mined. Lungs of men who had been exposed to iron rust, were opaque to X-rays and quite different to the lungs of miners who had worked in siliceous ores.

Dr. H. L. Kesteven pointed out that the lode in Broken Hill contained silica laden with lead. He suggested that in the process of blasting this lode highly soluble compounds of lead would be scattered and the dust would be taken up in the bronchioles. Proteins were precipitated by the soluble salts of lead. This might account for the different results produced by working in Broken Hill mines. The same might be said of iron, if the iron-bearing lode were blasted. He asked Dr. Watkins-Pitchford whether they were to abandon the conception of anthracosis as a pathological condition.

Dr. J. H. L. Cumpston said that he felt diffident in taking part in the discussion so ably conducted by Drs. Watkins-Pitchford, Chapman and Sayers. There were two points to which he wished to refer. The first was in connexion with mild degrees of pleuritic inflammation. He had noted this quite frequently in the lungs of miners at Kalgoorlie and had come to the conclusion that they were primarily silicotic in origin. He presumed from what Dr. Watkins-Pitchford had said, that he had been mistaken and that these mild pleuritic lesions were in reality tuberculous. The second point was that he had noted the association of emphysema and dilatation of the heart in advanced pneumonoconiosis. He asked whether there was not a late stage in the fibrotic process in which the lung became emphysematous. In conclusion he stated that he had appreciated the value of the discussion and particularly of Dr. Watkins-Pitchford's able address. He also referred to the immense factor in education that the work of the Public Health departments were called upon to undertake.

In his reply Dr. Watkins-Pitchford said that he would not refer at length to the points raised by the several speakers, as the hour was late. He was becoming more and more convinced that silica was the essential cause of all pneumonoconiotic fibrosis of the lung. The rapidity with which the disease developed, its extent and the degree of its incidence upon an industry were primarily a question of the amount of silica inhaled. In Broken Hill where the lode contained only between 10% and 17%

of free silica there was a low incidence of fibrosis. The pathological conditions found at autopsy were rarely as fully developed under these conditions as they were in those places where quartz rock was mined and crushed, nor was the disease as great a menace to health.

To Dr. Sayers he stated that at Johannesburg they had unusual facilities for the recording of observations upon men who had followed various occupations. There was a very large labour population and many records had been collected of men who had been colliers, who had worked exclusively in iron ore or in slate, and of men who had worked in siliceous ores. The experience gained had taught him that it was possible to determine, or at least to suspect, when a man had been working exclusively in iron ore from the indications of the skiagraph. There was a considerable difference between this picture and the typical picture of silicosis. Nothing else than silica was capable of producing the typical radiographic appearances of pulmonary fibrosis.

Dr. Kesteven had asked whether anthracosis was a genuine condition. He would say that it was, but that it was not a disease. Coal miners and others who worked in an atmosphere of coal dust, undoubtedly harboured coal dust in their lungs for many years, but they remained in almost all cases unaffected by its presence and no symptoms of pulmonary disability followed. The lungs were jet black and a slight degree of fibrosis was occasionally developed. It should, however, not be forgotten that in many places it was impossible to mine for coal without hewing through seams of sandstone. It was this fact which accounted for definite fibrosis in coal workers when such occasionally occurred.

Dr. Watkins-Pitchford made allusion to Dr. Cumpston's report of 1911 made in the preradiographic days, which he designated an excellent one of which his Australian colleagues might be proud. Dr. Cumpston had thought at the time when the report was written that the pleuritic lesions were entirely silicotic. He, the speaker, did not think that this was so. He had described in his paper the little greyish pleural plaques that appeared in the early stage. He was satisfied that there was no true pleurisy until an infection occurred and the infection was usually tuberculous.

In conclusion he said that it had been a great pleasure to him to attend the meeting and to address them. He was much indebted to Dr. Todd, whose kindness and energy had impressed him greatly.

A MEETING OF THE QUEENSLAND BRANCH OF THE BRITISH MEDICAL ASSOCIATION was held in the B.M.A. Building, Adelaide Street, Brisbane, on August 3, 1923, DR. D. A. CAMERON, the PRESIDENT, in the chair.

Congenital Absence of an Eye.

THE HONOURABLE DR. W. F. TAYLOR presented a boy, aged five years, who had been brought to him on account of temporal hemianopsia of the right eye on February 8, 1923. Dr. Taylor pointed out that there was congenital absence of the left eye. The socket was small, but otherwise perfect. The left eyelids were smaller than the right. Difficulty had been experienced in the examination of the fundus of the right eye by horizontal nystagmus. The father and the mother had perfect vision, as had his two brothers. His third brother had perfect vision of the right eye, but impaired vision of the left eye. The vision was $^{6}/_{50}$. The patient had been treated with violet rays for five months. There had been a slight improvement in the field of vision. An artificial eye had been made; the patient would wear it in the left socket.

DR. J. LOCKHART GIBSON said that he had been reminded that evening that he had seen at least two persons in whom one eye was congenitally absent. One of these was the child shown by Dr. Taylor. He had been sent to him, the speaker, by Dr. Halford as a baby. The other had been sent to him by Dr. Basil Hart ten years previously. In each instance the optic vesicle was apparently not developed. Otherwise the socket was practically normal. Dr. Taylor's observation that when the child had first been seen by him there appeared to be temporal hemianopsia of the right eye, must have been due to inattention or to want of education as the temporal field appeared to be good at the time of the meeting. The left optic tract must, therefore, have developed as usual. During his long connexion as Honorary Ophthalmologist with the Hospital for Sick Children, he had seen all sorts and sizes of congenital micro-ophthalmic eyes; some of them had been very "wee."

DR. A. C. F. HALFORD stated that he had been the *accoucheur* when the mother of Dr. Taylor's patient had been confined. There had been no attempt at the formation of an eye-ball. The condition had apparently been due to interference with the blood supply of the parts affected, possibly by an embolus.

Re-Education in Spastic Paralysis.

DR. S. F. MCDONALD showed a patient with spastic paralysis to illustrate the result of re-education of the muscles of the hand by manual training. The patient was twenty-one years of age. Seven years previously he had had an acute illness with vomiting and severe headache. There had been double papillœdema. A cerebral tumour had been diagnosed. Dr. R. A. Meek had operated. He had made a trephine opening over the right motor area. No tumour had been found, but there had been evidence of severe hydrocephalus. The lateral ventricle had been drained. There had been slight left-sided hemiplegia since the onset of the vomiting. This had become permanent and involved the whole of the left side. When seen two years previously he had had complete left hemiplegia. The left hand had been in a typical position; the gait had been spastic; all the reflexes had been exaggerated and ankle clonus and Babinski's sign had been elicited. His condition at the time of the meeting was much improved. This was attributed to manual training. He was doing skilled cabinet making. He used all his tools freely; he was walking well and he was living an almost normal life. It was uncertain what the original lesion had been, but Dr. McDonald considered that the remarkable improvement resulting from re-education was worthy of record.

Breast Feeding.

Dr. S. F. McDonald read a paper entitled "Breast Feeding" (see page 379).

DR. A. JEFFERIS TURNER wished to congratulate Dr. McDonald on his timely and practical paper. If the mortality of a surgical operation were 25%, it would be a serious matter and would not be lightly undertaken. Weaning, especially in the first month, was comparable to such a risky operation. Unfortunately it was very lightly regarded by the laity. Some midwifery nurses were, unfortunately, no better than the general public. The trouble was frequently due to irregular and too frequent feedings. When the infant was hungry and the weight was decreasing, an increased milk supply was required. He had not witnessed any good results from the use of the common galactagogues. The remedy was proper massage of the breasts and the gaining of the confidence of the mother. If no increase were obtained by these means, supplementary feeding should be adopted. It was of no use to give the bottle alone, for in a very short time the milk supply would cease. He strongly recommended antenatal care of the mother during the last few months of pregnancy and a following up of the infant for a period longer than the puerperal period.

DR. A. C. F. HALFORD held they should endeavour to eliminate the baneful influences surrounding the infant. These were in particular maternal doubts regarding the possibility of nursing and the influence of those nurses who in the first fortnight did their best to prevent the child disturbing them or the mother. The pacification of the infant was often begun before the onset of the flow of milk by the giving of artificial food. Castor oil was given as a soporific, despite the bad after effects it had on the gastro-intestinal tract. Dr. Halford thought that

it was strange that they had not been able to convince the trained nurse of the danger of these methods. He was of opinion that the profession was too complacent regarding artificial feeding when the nurse or mother requested it. It was always worth while to try to bring milk back to the breasts which were apparently not functioning. He had had success as late as seven weeks after weaning. Definite incompatibility was very rare. He always told the mothers that it was not the breast milk but the infant that was at fault. In the only infant he had seen who was hypersensitive to its mother's milk, he had injected one cubic centimetre of milk three times; this had proved successful.

DR. T. H. F. MATHEWSON said that the medical profession should shoulder the blame for the readiness to sanction weaning. This was reflected in the behaviour of nurses who were not sufficiently instructed. Many maternity hospitals were small buildings and the mothers were afraid of allowing their infants to cry.

DR. D. GIFFORD CROLL, C.B.E., referred to the propaganda issued by firms manufacturing artificial foods. These were often followed up by visits by nurses in their employment. He had found that the friends and relatives frequently were prepared to encourage the mother in her desire to nurse her infant. Dr. McDonald's remarks regarding the Brisbane milk supply probably had reference to the metropolitan rather than to the suburban area. The milk was not as bad in the suburbs as he had stated, although it was far from perfect. He considered that a baby could safely be given this fresh milk instead of one of the dry milk preparations. He agreed with Dr. McDonald regarding the effect of the use of of "Hygeia" feeding bottles. He had found the test meal of the greatest value. The principal objection to breast feeding in tuberculosis was the condition of the mother and not of the infant.

DR. L. A. A. FORBES asked whether there was any definite age for weaning. The text-books were vague on this subject. He had seen several children of fifteen to eighteen months who were apparently thriving on the breast. He thought that a chemical examination of the breast milk might be of assistance in determining the time to wean the infant.

DR. E. S. MEYERS was of opinion that Dr. McDonald might have mentioned some details of medicinal treatment. He asked whether he had had any failures and what he had done in these circumstances.

DR. W. CROSSE asked what was the best artificial food to employ if breast feeding was found to be impossible.

In his reply Dr. McDonald thanked Dr. Halford for mentioning the subject of the restoration of lactation. This was quite a possible feat. There had been instances in the activities of those connected with the Victorian Welfare Centres in which lactation had been restored after three months. The personality of the nurse counted for a great deal, but the methods were those he had described, stimulation by the application of the infant and breast massage. The possibility of anaphylaxis had been referred to from time to time. He had not experienced this phenomenon. He agreed with Dr. Mathewson that the whole question of nursing homes required attention. There were the matters of the unsuitability of the building. that of the site and lack of experience on the part of the staff. Under these conditions the baby suffered and to a less extent so did the mother. Much depended on the answer to the question: Which was the better, a good private home or an indifferent nursing home?

Dr. Croll seemed to have been more fortunate in regard to the milk at his disposal in the suburbs than were the city dwellers. He had found it to be very rare to obtain trustworthy milk in the city and had therefore been compelled to prescribe preserved foods. In regard to Dr. Stewart's objection to tuberculous women having children at all, the feelings of the mothers had to be considered. He had seen one tuberculous woman whose one wish was to have a child, regardless of the fact that it would make her own health much worse. In reply to Dr. Forbes he pointed out that in Queensland the age of weaning varied with the season. Examination of breast milk, whether chemical or otherwise, was of little use. Dr. Meyers had asked for details of more failures. He had cited three failures out of nine. The proportion was high. It merely showed that breast feeding was a difficult and complicated affair that required the personal attention of the practitioner. It should not be left to the nurse or to members of the family. The fewer drugs given to babies, the better it was for the babies. The best substitute for mother's milk was the milk of another woman. Very far down in the second class came fresh cow's milk, if trustworthy, like the Talbot or Willsmere supplies in Melbourne. Next came the dried milks, the condensed milks and very far down the patent foods.

NOMINATIONS AND ELECTIONS.

THE undermentioned have been nominated for election as members of the New South Wales Branch of the British Medical Association:

OWEN, ALAN BERTIE SAMUEL, M.B., Ch.M., 1921 (Univ. Sydney), 58, Cambridge Street, Stanmore.
PUCKEY, MARY COURTENAY, M.B., Ch.M., 1923 (Univ. Sydney), Seafield, Wollongong.
RATCLIFF, DAISY HUNTER, M.B., Ch.M., 1921 (Univ. Sydney), Wentworth Road, Vaucluse.
SCHWARTZ, ERNEST GEORGE, M.B., Ch.M., 1923 (Univ. Sydney), 22, Maher Street, Hurstville.
SOLOMON, HERBERT JOHN, M.B., Ch.M., 1923 (Univ. Sydney), Urara, Darling Point Road, Darling Point.

NOTICES.

WE have been requested to announce that a meeting of the Section of Neurology and Psychiatry of the Victorian Branch of the British Medical Association will be held at the Medical Society Hall, East Melbourne, on Monday, October 15, 1923, at 8.15 p.m. Dr. R. C. Withington will read a paper on "Some Aspects of Anxiety States."

All members of the Branch are invited to be present.

Medico-Legal.

G. S. THOMPSON *versus* THE AUSTRALASIAN MEDICAL PUBLISHING COMPANY, LIMITED, AND OTHERS.

AN action by G. S. Thompson to recover damages for an alleged libel published in THE MEDICAL JOURNAL OF AUSTRALIA from the Australasian Medical Publishing Company, Limited, Shipping Newspapers, Limited, and H. W. Armit was commenced on Wednesday, September 19, 1923, in the Supreme Court, New South Wales, before Mr. Justice James and a special jury of twelve. The hearing was spread over eleven days. On October 4, 1923, the jury by a majority returned a verdict for the plaintiff with one thousand pounds damage. A stay of proceedings was granted.

Post-Graduate Work.

LECTURES IN MELBOURNE.

THE Melbourne Permanent Committee for Post-Graduate Work announce that in response to representations they have made arrangements for the delivery of two lectures on the action and use of "Insulin." Members of the British Medical Association will be given the opportunity of learning all that is known concerning this preparation.

The lectures will be given by Dr. W. J. Young and Dr. J. F. Wilkinson on Tuesday, November 20, 1923, at the Walter and Eliza Hall Institute for Research in Pathology

and Medicine at a quarter past eight o'clock in the evening. Dr. Young will deal with the physiology and bio-chemistry and Dr. Wilkinson will deal with the clinical application. These two lectures will be delivered during the first week of the November course of post-gradute instruction. All members of the British Medical Association in Melbourne at the time may attend these two lectures free of cost.

The November course will commence on November 19, 1923, and will end on December 1, 1923. The fee for the course is three guineas.

Congress Notes.

THE AUSTRALASIAN MEDICAL CONGRESS (BRITISH MEDICAL ASSOCIATION).

General Arrangements.

The Executive Committee of the Australasian Medical Congress (British Medical Association), Melbourne, 1923, are now completing the arrangements for the first session. The final arrangements, however, cannot be made until those who intend to be present, have notified the fact to the Honorary Treasurer or to the Local Secretaries. We appeal to each member of the British Medical Association in the Commonwealth to consider the question as to whether or not he should attend the Congress as a matter of urgency and to apply for membership without any further loss of time. The method of procedure is very simple. A form has to be completed and forwarded to the Local Secretary in the State in which the applicant resides, save in the case of Victorian members who are required to forward their applications to the Honorary Treasurer. For the convenience of members we print the form with instructions in almost every issue of this journal.

Date.

The date of the first session of Congress is November 12, 1923, to November 17, 1923.

Organization.

The constitution and regulations of Congress have been drawn up by the Federal Committee of the British Medical Association in Australia and have been published in The Medical Journal of Australia of February 25, 1922 (pages 218 to 221).

The President of the first session is Mr. G. A. Syme.

The Honorary General Secretary is Dr. A. L. Kenny (Medical Society Hall, East Melbourne, Victoria).

The Honorary Treasurer is Dr. C. H. Mollison (41, Spring Street, Melbourne).

The Secretaries of the Sections are as follows:

Section of Medicine: Drs. A. V. M. Anderson and K Hiller.

Section of Surgery: Messrs. V. Hurley, C.M.G., and Fay Maclure, O.B.E.

Section of Obstetrics and Gynæcology: Drs. R. H. Morrison and Margaret McLorinan.

Section of Pathology and Bacteriology: Drs. H. R. Dew and F. L. Apperly.

Section of Preventive Medicine and Tropical Hygiene: Dr. C. L. Park.

Section of Ophthalmology: Dr. Leonard Mitchell.

Section of Neurology and Psychiatry: Drs. S. V. Sewell and A. J. W. Philpott.

Section of Diseases of Children: Drs. H. Douglas Stephens and F. Kingsley Norris.

Section of Naval and Military Medicine and Surgery:

Section of Dermatology: Dr. A. W. Finch Noyes.

Section of Radiology and Medical Electricity: The Honourable Stanley Argyle, M.L.A., and Dr. Kenneth S. Cross.

Museum Committee: Dr. A. J. Trinca.

Accommodation.

The attention of members and intending members is directed to the necessity for arranging accommodation for themselves and those who may accompany them. Melbourne will be full during the time of the first session of Congress. In order to avoid disappointment rooms at hotels or elsewhere should be booked without delay. The following list of hotels is published for the benefit of intending members.

House.	Address.	Persons to Accommodate.	Rooms.		Tariff.	
			Double	Single.	Per Day.	Per Wk.
Scott's	Collins Street West, Melbourne	26	6	14	23s.	
Windsor (formerly Grand)	Spring Street, Melbourne	200	—	—	20s.	
Carlyon's	Spencer Street, Melbourne	30	—	—	Single Room, 5s.; Double Rooms, 10s.; Meals as taken	
Union Club	Collins Street West, Melbourne	6	—	—	20s.	
New Treasury	Spring Street, Melbourne	20	—	—	16s.	£4 4s.
Port Phillip	Flinders Street, Melbourne	30	—	—	15s.	
Victoria Coffee Palace	Collins Street East, Melbourne	200	—	—	Single Rooms, 3s. 6d. and 4s. 6d.; Double Rooms, 6s., and 10s.; Meals as taken	
Federal Palace	Collins Street West, Melbourne	200	—	—	11s. 6d. to 20s.	
Cathedral Hotel	Swanston Street, Melbourne	12	—	—	10s. 6d.	£3 3s.
Esplanade (Carlyon's)	Esplanade, St. Kilda	6	—	—	20s.	
George	Fitzroy Street, St. Kilda	40	20	—	15s.	
Ritz	Fitzroy Street, St. Kilda	30	—	—	20s.	
Prince of Wales	Fitzroy Street, St. Kilda	30	15	—	13s. 6d.	
Beaconsfield	Beaconsfield Parade, St. Kilda	25	—	—	15s.	
Inverleigh	12, Acland Street, St. Kilda	11	4	3		
Victoria Hotel	South Melbourne	30	—	—		£5 5s. to £6 6s.
Bridge Hotel	Mordialloc (15 miles by electric train)	14	4	6	12s.	£3 3s.
Hampton Hotel	Hampton (10 miles by electric train)	12	—	—	15s.	£3 3s.
Royal Terminus (Kemp)	Brighton Beach (9 miles)	10–12	—	—		£5 5s.
Beaumaris Hotel	Beaumaris (11 miles by motor to rail in November)	20	—	—	15s.	£4 4s.
Mentone Hotel	Mentone (13 miles by electric train)	20–50	—	—	15s.	£4 4s.

Congress Dinner.

An official dinner will be held on Thursday, November 15, 1923. Members desiring to participate at this function must apply for tickets not later than October 31, 1923. A remittance of one guinea should accompany the application which should be addressed to Dr. B. Zwar, 54, Collins Street, Melbourne. The Catering Committee has determined to distribute the seats to members according to the sections with which they wish to be associated. This arrangement has been modelled on the lines of the dinner of the Annual Meeting of the British Medical Association. Wines, spirits, cigars and cigarettes are not included and will be an extra charge to the members.

University Intelligence.

THE UNIVERSITY OF SYDNEY.

A MEETING of the Senate of the University of Sydney was held on September 17, 1923.

The following degrees were conferred.

Bachelor of Medicine: Mr. A. A. O'Leary.

Bachelor of Medicine and Master of Surgery: F. Abbey Wiesener, A. O. Barkley, H. Barnett, P. L. Charlton, A. L. Clowes, L. T. Currie, W. C. Darragh, F. R. E. Duke, S. T. Erby, C. C. Fleck, W. Freeborn, W. H. Golding, Madeleine N. Gors, A. R. Hamilton, R. E. Henry, K. D. Hudson, A. Jenkins, C. J. N. King, J. Leah, C. W. Luscombe, O. W. Mater, J. B. W. Meredith, Mary A. Minahan, W. Moppett, R. D. Mulvey, R. J. Nash, H. H. O'Connor, J. A. Parkes, R. T. Paton, J. N. G. Pirie, Mary C. Puckey, T. S. Punch, T. R. Quinn, B. M. B. Riley, B. W. B. Riley, E. G. Schwartz, R. B. Shute, H. J. Solomon, Jean S. Stobo, E. A. Stormon, J. G. Thompson, P. M. Williams, and the following *in absentia*: Julia I. Amphlett, H. G. Armstrong, Maisie H. Asher, Jane M. Ballantine, H. L. C. Maitland, Theresa M. Pyne, R. J. Stevenson.

The following resolution of sympathy was carried, the members of the Senate standing:

> That the Senate of the University of Sydney desires to express its profound regret for the death of His Excellency Sir Walter Davdison, Governor of New South Wales and Visitor of the University, who by his unwearied activities, his genial kindliness and his keen desire for the welfare of the State endeared himself to all sections of the community and who on every occasion showed a warm interest in the aims and works of the University and was always ready with his help to its graduates who were going to pursue their studies abroad.
>
> That a copy of this resolution with assurance of sincere sympathy in her great sorrow be forwarded to Dame Margaret Davidson.

The Senate also passed the following resolution, the members standing:

> The Senate desires to extend its sympathy with the University of Queensland in the loss by death of its late Chancellor, Sir Pope A. Cooper, a distinguished graduate of this University and an honoured member of the legal profession in Queensland.

A communication was received from the trustees of the late A. W. Fairfax, reporting a bequest of £1,000. It was decided that a letter of thanks should be sent to the Trustees.

A valuable gift of microscope slides was received from Mr. Maynard Medcalf, Orchard Laboratory, Oberlin, Ohio, United States of America. It was decided to thank Mr. Medcalf for his generous gift.

Dr. R. H. Todd was re-appointed lecturer in medical ethics for 1923.

On the recommendations of the Faculty of Science and the Professorial Board it was decided to establish the degree of Master of Science (M.Sc.).

Correspondence.

HYPNOTIC SUGGESTION.

SIR: I have read with interest an article by Dr. McAree and a letter by Dr. Arthur in the journal lately, in favour of treatment by suggestion and also Dr. Parker's criticism of such treatment.

I am thoroughly in accord with Dr. Arthur in his plea for some training in psycho-therapeutics, for undergraduates.

As Dr. Arthur very rightly says, there is no need for the possession of occult power to be able to do this kind of treatment; experience, especially in choosing the cases suitable for such treatment, is, however, a great help.

As is well known, psycho-therapeutics can be used by three methods: psycho-analysis, hypnotism and suggestion. I will briefly relate an example of each method in which cure resulted.

A patient who for five years was an inmate of a nursing home, confined to bed and insisting on the room being darkened; seeing no one of her friends and only occasionally speaking at all. Twelve months out of these five years, she was in a mental home. She was treated, to quote Dr. Parker, by a number of "conscientious gentlemen, who gave sound advice, based on knowledge, judgement, reason and common sense," but remained the same. After five months of treatment by psycho-analysis this patient is now a normal person in every way and managing her own affairs.

A successful business man who had lost the "sleep habit" and suffered from insomnia for ten years. He also had two obsessions in which, when in trains or aboard ship, he felt felt the imperative desire to throw himself out of the train or overboard, and dared not enter either latterly. Six nights in succession at bed time he was hypnotized and contrary suggestions made and he completely lost his insomnia and obsessions.

This patient was referred to me by a surgeon who was, up till this time, quite as convinced as Dr. Parker about hypnotism. He had been treated by "conscientious gentlemen" including the surgeon, who gave him sound advice and drugs based on knowledge *et cetera*.

A case of rheumatoid arthritis of a progressive nature, confined to bed and treated for twelve months *secundum artem*, but not making any progress. This patient also had great mental worry owing to past unhappiness which was irretrievable. However, four weeks of suggestion in which a philosophic attitude of mind was suggested made such a difference that the patient was able to walk out of hospital and, except for some degree of stiffness, is now able to enjoy normal life again free from pain.

As Dr. Parker says: "We never hear of the gambler's losses." Suggestion as treatment has its failures, but with experience these failures become less. One learns to pick out the cases that are not likely to respond. One of the essentials for success is a desire on the patient's part to get well; without this hypnoism or suggestion will probably fail; but, even here, psycho-analysis sometimes succeeds as it did in the first case quoted.

Drugs produce measurable physical effects; knives can cut away diseased parts; but, in the realm of the subconscious, we are dealing with a field but little known or understood.

Dr. Milne Bramwell frankly tells his patients he cannot explain how the curative effects are produced, but no one can deny results in selected cases.

I would recommend practitioners and students to read Dr. Bramwell's article in the "Index to Treatment" by Hutchison and Sherren if they are interested in this form of treatment.

Yours, etc.,

E. P. OLDHAM.

61, Collins Street, Melbourne,
September 25, 1923.

Naval and Military.

APPOINTMENTS.

THE following appointments, changes *et cetera* have been promulgated in the *Commonwealth of Australia Gazette*, No. 67, of September 27, 1923:

Permanent Naval Forces of the Commonwealth.

SEA-GOING FORCES.

Services of an Officer Dispensed with under Naval Defence Act.—The services of SURGEON LIEUTENANT (on probation) CHARLES ALEXANDER CROTHERS are dispensed with under section 30 of the Naval Defence Act, dated 15th September, 1923. (Ex. Min. 202.)

Appointments.—WILLIAM LANGLEY BROOKES, DENIS ADRIAN PRITCHARD, and JACK MCKENZIE WOODS are appointed Surgeon Lieutenants (on probation), dated 3rd August, 1923.

Appointments.—ARTHUR ROBERT HILL, M.B., Ch.B., and JAMES MARTIN FLATTERY, M.B., Ch.M., are appointed Surgeon Lieutenants (on probation). Dated 21st August, 1923, and 29th August, 1923, respectively.

Australian Military Forces.

SECOND MILITARY DISTRICT.

Australian Army Medical Corps Reserve.

HONORARY MAJORS C. G. MACLEOD and T. S. KIRKLAND, and HONORARY CAPTAINS F. PAIN and F. M. BLACKWOOD are retired under the provisions of Australian Military Regulation 152 (1), 8th September, 1923.

THIRD MILITARY DISTRICT.

Australian Army Medical Corps.

LIEUTENANT K. D. FAIRLEY is transferred to the Australian Army Medical Corps Reserve, 1st August, 1923.

Australian Army Medical Corps Reserve.

HONORARY MAJOR J. G. WILSON is placed on the Retired List, with permission to retain his rank and wear the prescribed uniform, 18th August, 1923.

FOURTH MILITARY DISTRICT.

Australian Army Medical Corps.

CAPTAIN B. F. MOORE is appointed from the Reserve of Officers, 1st July, 1923; CAPTAIN A. F. STOKES is transferred to the Reserve of Officers, 1st July, 1923.

Proceedings of the Australian Medical Boards.

NEW SOUTH WALES.

THE undermentioned have been registered, under the provisions of the *Medical Act, 1912 and 1915*, as duly qualified medical practitioners:

ABBEY-WIESENER, FREDERICK, M.B., Ch.M., 1923 (Univ. Sydney), Ashton, Elizabeth Bay Road, Elizabeth Bay.

ARMSTRONG, HAROLD GILES, M.B., Ch.M., 1923 (Univ. Sydney), Eulo, Railway Street, Chatswood.

ASHER, MAISIE HEATH, M.B., Ch.M., 1923 (Univ. Sydney), 30, Eglinton Road, Glebe Point.

BARKLEY, ALFRED OSWALD, M.B., Ch.M., 1923 (Univ. Sydney), Ormeau, 13, Tahlee Street, Burwood.

BARNETT, HARRY, M.B., Ch.M., 1923 (Univ. Sydney), Leston, 96, Beach Street, Coogee.

CHARLTON, PERCIE LEONARD, M.B., Ch.M., 1923 (Univ. Sydney), Rushall, Alma Street, Pymble.

CLOWES, ARTHUR LYNTON, M.B., Ch.M., 1923 (Univ. Sydney), 24, Bennett Street, Neutral Bay.

CURRIE, LESLIE THOMAS, M.B., Ch.M., 1923 (Univ. Sydney), Selwyn, Berna Street, Canterbury.

DARRAGH, WILLIAM CHANDLER, M.B., Ch.M., 1923 (Univ. Sydney), Lucy Street, Ashfield.

DUKE, FREDERIC REGINALD EDWARD, M.B., Ch.M., 1923 (Univ. Sydney), 426, Darling Street, Balmain.

ERBY, SYDNEY THEODORE, M.B., Ch.M., 1923 (Univ. Sydney), Wigram Street, Granville.

FLECK, CLAUDE CROPTON, M.B., Ch.M., 1923 (Univ. Sydney), William Street, Granville.

FREEBORN, WALLACE, M.B., Ch.M., 1923 (Univ. Sydney), Carlton Crescent, Summer Hill.

GORS, MADELAINE NAMONA, M.B., Ch.M., 1923 (Univ. Sydney), 3, Winchcombe Avenue, Haberfield.

HENRY, ROBERT ERIC, M.B., Ch.M., 1923 (Univ. Sydney), Ethel Street, Burwood.

HUDSON, KINGSLEY DIXON, M.B., Ch.M., 1923 (Univ. Sydney), The Rectory, Hurstville.

JENKINS, ARCHIBALD, M.B., Ch.M., 1923 (Univ. Sydney), 14, Oxley Street, Glebe Point.

LEAH, JOHN, M.B., Ch.M., 1923 (Univ. Sydney), 25, Mansfield Street, Glebe Point.

LUSCOMBE, CECIL WALTER, M.B., Ch.M., 1923 (Univ. Sydney), Macquarie Street, Liverpool.

MATER, OTTO WALDEMAR, M.B., Ch.M., 1923 (Univ. Sydney), Yooralla, Gilbert Street, Manly.

MEREDITH, JOHN BALDWIN WATERS, M.B., Ch.M., 1923 (Univ. Sydney), The Bungalow, Raymond Terrace,

MINAHAN, MARY AGNES, M.B., Ch.M., 1923 (Univ. Sydney), St. Mark, Paul Street, Waverley.

MOPPETT, WARNFORD, M.B., Ch.M., 1923 (Univ. Sydney), Wilga, The Crescent, Vaucluse.

MULVEY, ROY DADSON, M.B., Ch.M., 1923 (Univ. Sydney), Kelvin, Abbotsford Road, Homebush.

NASH, REGINALD JAMES, M.B., Ch.M., 1923 (Univ. Sydney), Oakburn, Cranbury, *via* Orange.

O'LEARY, ARTHUR ALPHONSUS, M.B., 1923 (Univ. Sydney), 44, Wigram Road, Glebe.

PARKES, JOSEPH ALEXANDER, M.B., Ch.M., 1923 (Univ. Sydney), 53, Ryan Street, Lilyfield.

PATON, ROBERT THOMSON, M.B., Ch.M., 1923 (Univ. Sydney), Beaufort Court, Darlinghurst.

PIRIE, JAMES MURRAY GORDON, M.B., Ch.M., 1923 (Univ. Sydney), Forbesville, Speed Street, Liverpool.

PUCKEY, MARY COURTENAY, M.B., Ch.M., 1923 (Univ. Sydney), Seafield, Wollongong.

PUNCH, THOMAS SYDNEY, M.B., Ch.M., 1923 (Univ. Sydney), Darley Street, Marrickville.

PYNE, THERESA MARY, M.B., Ch.M., 1923 (Univ. Sydney), Waters Road, Neutral Bay.

QUINN, THOMAS ROBERT, M.B., Ch.M., 1923 (Univ. Sydney), 136, Pitt Street, Sydney.

RILEY, BERNARD MORETON BIRKENHEAD, M.B., Ch.M., 1923 (Univ. Sydney), Tullona, Park Road, Burwood.

SCHWARTZ, ERNEST GEORGE, M.B., Ch.M., 1923 (Univ. Sydney), 22, Maher Street, Hurstville.

SHUTE, REDVERS BULLER, M.B., Ch.M., 1923 (Univ. Sydney), 103, Macleay Street, Pott's Point.

SOLOMON, HERBERT JOHN, M.B., Ch.M., 1923 (Univ. Sydney), Urara, Darling Point Road, Darling Point.

STOBO, JEAN SELDON, M.B., Ch.M., 1923 (Univ. Sydney), Avon Road, Pymble.

STORMON, EDWARD AMBROSE, M.B., Ch.M., 1923 (Univ. Sydney), 19, Pemell Street, Enmore.

THOMPSON, JOSEPH GEORGE, M.B., Ch.M., 1923 (Univ. Sydney), 3, Macarthur Parade, Dulwich Hill.

VICTORIA.

THE undermentioned have been registered, under the provisions of the *Medical Act, 1912 and 1915*, as duly qualified medical practitioners:

BALL, LEONARD HUNT, M.B., B.S., 1923 (Univ. Melbourne), 782, Heidelberg Road, Ivanhoe.

BEARHAM, GEORGE BANKIN, M.B., B.S., 1923 (Univ. Melbourne), McLeod Street, Bairnsdale.

BEATTIE, IVO PAUL, M.B., B.S., 1923 (Univ. Melbourne), 17, Mercer Road, Malvern.
BENSON, FRANCIS RUPERT IGNATIUS, M.B., B.S., 1923 (Univ. Melbourne), 60, Tennyson Street, St. Kilda.
BLAIR, JOHN MURRAY, M.B., B.S., 1923 (Univ. Melbourne), "Mernda," Jolimont.
BRENNAN, KEVIN, M.B., B.S., 1923 (Univ. Melbourne), 42, Riversdale Road, Hawthorn.
CAMERON, JOHN GLADSTONE, M.B., B.S., 1923 (Univ. Melbourne), 29, Holmes Road, Moonee Ponds.
CHARLTON, HAROLD WILLIAM, M.B., B.S., 1923 (Univ. Melbourne), care of J. C. Brown, Esq., Eastern Beach, Geelong.
CLARKE, RALEIGH, M.B., BS., 1923 (Univ. Melbourne), 21, Orrong Road, Elsternwick.
COURTNEY, CHARLES WILSON, M.B., B.S., 1923 (Univ. Melbourne), 11, Belmont Avenue, Kew.
DAVIS, JOSEPH, M.B., B.S., 1923 (Univ. Melbourne), 133, Lemon Avenue, Mildura.
EDWARDS, ERNEST RICHARD, M.B., B.S., 1923 (Univ. Melbourne), 15, Moorehouse Street, Malvern.
GUNDERSEN, SARA ELISABETH, M.B., B.S., 1923 (Univ. Melbourne), 15, Bluff Avenue, Elwood.
GUTTERIDGE, NOEL MIDDLETON, M.B., B.S., 1923 (Univ. Melbourne), "Thenford," Orrong Road, Armadale.
HANDS, EDWARD WILLIAM, M.B., B.S., 1923 (Univ. Melbourne), Barnard Street, Bendigo.
JONES, CONSTANCE BRONWEN, M.B., B.S., 1923 (Univ. Melbourne), 68, Alma Road, St. Kilda.
KERR, KEITH GARDNER, M.B., B.S., 1923 (Univ. Melbourne), 15, Kintore Street, Camberwell.
LEHMAN, SIDNEY JAMES, M.B., B.S., 1923 (Univ. Melbourne), 20, Avoca Street, South Yarra.
LOVE, LESLIE ANDERSON, M.B., B.S., 1923 (Univ. Melbourne), 33, Blessington Street, St. Kilda.
MATHEW, RANDOLPH YULE, M.B., B.S., 1923 (Univ. Melbourne), 69, The Grove, Coburg.
MILLS, ELEANOR LALLA ALICE HILLINGDON, M.B., B.S., 1923 (Univ. Melbourne), 1, Hawksburn Road, Hawksburn.
MACINNES, ALLAN FINLAY, M.B., B.S., 1923 (Univ. Melbourne), "Wando," Bambra Road, Caulfield.
MCLEOD, NORMAN, M.B., B.S., 1923 (Univ. Melbourne), 341, High Street, Prahran.
PEDLER, ALFRED CYRIL, M.B., B.S., 1923 (Univ. Melbourne), 528, Barker's Road, Upper Hawthorn.
REES, MAX ALFRED, M.B., B.S., 1923 (Univ. Melbourne), "Atami," Warragul Road, Oakleigh.
STEELE, WILLIAM HUEY GERRARD, M.B., B.S., 1923 (Univ. Melbourne), 6, Fermanagh Road, Camberwell.
SULLIVAN, THOMAS GEOFFREY, M.B., B.S., 1923 (Univ. Melbourne), 92, Rowe Street, North Fitzroy.
THWAITES, JOHNSTONE LESLIE, M.B., B.S., 1923 (Univ. Melbourne), 537, Malvern Road, Toorak.

Name of Practitioner Restored to the Register.

MARTELL, HAROLD HENRY FIELD, Adelaide Street, Fremantle, Western Australia.

Medical Appointments.

DR. A. N. MAGNUS (B.M.A.) and DR. G. S. C. MAYRHOFER (B.M.A.) have been appointed Junior Resident Medical Officers at the Perth Hospital.

* * * *

DR. W. H. RIGBY (B.M.A.) has been appointed District Medical Officer and Public Vaccinator at Margaret River, Western Australia.

Medical Appointments Vacant, etc.

For announcements of medical appointments vacant, assistants, *locum tenentes* sought, etc., see "Advertiser," page xviii.

ALFRED HOSPITAL, MELBOURNE: Honorary Gynæcologist.

Medical Appointments: Important Notice.

MEDICAL practitioners are requested not to apply for any appointment referred to in the following table, without having first communicated with the Honorary Secretary of the Branch named in the first column, or with the Medical Secretary of the British Medical Association, 429, Strand, London, W.C..

BRANCH.	APPOINTMENTS.
NEW SOUTH WALES: Honorary Secretary, 30 - 34, Elizabeth Street, Sydney	Australian Natives' Association Ashfield and District Friendly Societies' Dispensary Balmain United Friendly Societies' Dispensary Friendly Society Lodges at Casino Leichhardt and Petersham Dispensary Manchester Unity Oddfellows' Medical Institute, Elizabeth Street, Sydney Marrickville United Friendly Societies' Dispensary North Sydney United Friendly Societies People's Prudential Benefit Society Phœnix Mutual Provident Society
VICTORIA: Honorary Secretary, Medical Society Hall, East Melbourne	All Institutes or Medical Dispensaries Australian Prudential Association Proprietary, Limited Mutual National Provident Club National Provident Association
QUEENSLAND: Honorary Secretary, B.M.A. Building, Adelaide Street, Brisbane	Brisbane United Friendly Society Institute Stannary Hills Hospital
SOUTH AUSTRALIA: Honorary Secretary, 12, North Terrace, Adelaide	Contract Practice Appointments at Renmark Contract Practice Appointments in South Australia
WESTERN AUSTRALIA: Honorary Secretary, Saint George's Terrace, Perth	All Contract Practice Appointments in Western Australia
NEW ZEALAND (WELLINGTON DIVISION): Honorary Secretary, Wellington	Friendly Society Lodges, Wellington, New Zealand

Diary for the Month.

OCT. 16.—New South Wales Branch, B.M.A.: Executive and Finance Committee.
OCT. 17.—Victorian Branch, B.M.A.: Council.
OCT. 17.—Western Australian Branch, B.M.A.: Branch.
OCT. 23.—New South Wales Branch, B.M.A.: Medical Politics Committee; Organization and Science Committee.
OCT. 25.—South Australian Branch, B.M.A.: Branch.
OCT. 25.—Brisbane Hospital for Sick Children: Clinical Meeting.
OCT. 26.—New South Wales Branch, B.M.A.: Branch.
OCT. 26.—Queensland Branch, B.M.A.: Council.
NOV. 9.—New South Wales Branch, B.M.A.: Clinical Meeting.
NOV. 9.—Queensland Branch, B.M.A.: Council.
NOV. 9.—South Australian Branch, B.M.A.: Council.
NOV. 13.—New South Wales Branch, B.M.A.: Ethics Committee.
NOV. 14.—Victorian Branch, B.M.A.: Last Date for Nomination of Council; Election of Scrutineers.

Editorial Notices.

MANUSCRIPTS forwarded to the office of this journal cannot under any circumstances be returned. Original articles forwarded for publication are understood to be offered to THE MEDICAL JOURNAL OF AUSTRALIA alone, unless the contrary be stated.

All communications should be addressed to "The Editor," THE MEDICAL JOURNAL OF AUSTRALIA, B.M.A. Building, 30-34, Elizabeth Street, Sydney. (Telephone: B. 4635.)

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